



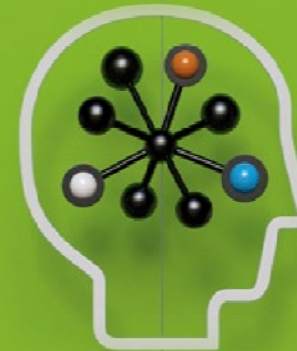
HP StorageWorks Enterprise Backup Solution (EBS) Hardware/Software Compatibility Matrix

November 2008 Version 1.0

Start Here

Key Updates:

- HP Secure Key Manager FW Update
- Expanded VLS Accelerated Deduplication support
- Library FW updates
- Symantec Backup Exec 12.5 Linux support
- Updated FC HBA Support
- Interoperability updates throughout



HP StorageWorks EBS Compatibility Matrix

Enterprise Backup Solution Compatibility Matrix Index

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The **HP StorageWorks Enterprise Backup Solution (EBS) Compatibility Matrix** provides information for designing data protection solutions, including backup/restore and archiving, that scale from entry-level workgroups to enterprise-level datacenters. It includes support for Direct Attach SCSI (DAS), Direct Attach Fibre (DAF), and Storage Area Network (SAN). It does not imply product availability.

Updates/changes to individual fields within the Matrix will be **highlighted in bold RED**. Products **highlighted in yellow** will be removed from the EBS Compatibility Matrix in the next release. Previous versions of the EBS Compatibility Matrix are available on the web at www.hp.com/go/ebs.

HP partners with leading application and product vendors to provide backup/restore, archiving, and data security solutions. See below for information on the Extended Solution Interoperability (ESI) and Tape Automation Compatibility (TAC) categories:

Extended Solution Interoperability (ESI): HP performs on-going interoperability and extensive solution testing with these applications to provide fully certified and supported data protection solutions that include HP tape libraries, autoloaders, and virtual library systems. See the VLS or Libraries ESI Partner Products pages for compatibility information. Extensive solution details including operating system details, host bus adapter and driver information, SAN infrastructure, and extended tape library feature support can be found throughout this document.

Tape Automation Compatibility (TAC): These products are verified for compatibility with HP tape libraries, autoloaders, and virtual library systems. See the VLS or Libraries TAC Partner Products pages for compatibility information. Consult the product compatibility guide(s) for additional support details such as product version information, driver details, firmware revisions, patch levels, etc.

This document shows compatibility for SAN media servers. A SAN media server is defined as a server with direct attached tape drives. Other operating systems may be supported within EBS by the respective ISVs as LAN clients., where a LAN client does not have direct attached drives but is backed up over a LAN connection to a server with attached tape drives.


Additional technical information can be found in the Enterprise Backup Solution Design Guide and various Backup Application Implementation Guides located on the web at www.hp.com/go/ebs. For information on stand-alone tape products and compatibility, go to www.hp.com/go/connect.

HP StorageWorks EBS Compatibility Matrix

Sample Page Layout

HP StorageWorks EBS Compatibility Matrix						
Windows (Integrity)						
DAS, DAF, and SAN Support	HP Data Protector	CA ARCserve	BMC NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec Veritas NetBackup
Operating Systems ²						
Windows Server 2003 (64-bit)	sp2	sp2	sp2	sp2		sp2
Servers						
HP Integrity Superdome and Mid-Range (rx7000-rx8000 Series, Integrity)	✓	✓	✓	✓		✓
HP Integrity Entry-Level (rx1000-rx6000 Series, Integrity)	✓	✓	✓	✓		✓
4Gb Fibre Channel Host Bus Adapters ^{1,4} (HP Branded / 3rd Party)						
HP1105 (4Gb, PCI-e) for HP e-Class BladeSystem						
FW	2.72a2	2.72a2	2.72a2	2.72a2		2.72a2
WIN 2003 StorPort Driver ^{5,7}	6.2.00a12	6.2.00a12	6.2.00a12	6.2.00a12		6.2.00a12
AB002A / Emulex LP1150 (4Gb, PCI-e)						
AB003A / Emulex PL11002 (4Gb, PCI-e)						
FW	2.72a2	2.72a2	2.72a2	2.72a2		2.72a2
WIN 2003 StorPort Driver ^{5,7}	6.2.00a12	6.2.00a12	6.2.00a12	6.2.00a12		6.2.00a12
A0311A / Qlogic QLE2460 (4Gb, PCI-e)						
A0300A / Qlogic QLE2462 (4Gb, PCI-e)						
ER	1.09	1.09	1.09	1.09		1.09
WIN 2003 StorPort Driver ^{5,7}	9.1.3.18	9.1.3.18	9.1.3.18	9.1.3.18		9.1.3.18
AD167A / Emulex LP1150 (4Gb, PCI-X 2.0)						
AD168A / Emulex LP11002 (4Gb, PCI-X 2.0)						
FW	2.72a2	2.72a2	2.72a2	2.72a2		2.72a2
WIN 2003 SCSIport Driver	6.5.30a2	6.5.30a2	6.5.30a2	6.5.30a2		6.5.30a2
WIN 2003 StorPort Driver ^{5,7}	6.2.00a12	6.2.00a12	6.2.00a12	6.2.00a12		6.2.00a12
A8429A / Qlogic QLA2460 (4Gb, PCI-X 2.0)						
A8379A/B / Qlogic QLA2462 (4Gb, PCI-X 2.0)						
ER	1.09	1.09	1.09	1.09		1.09
WIN 2003 StorPort Driver ^{5,7}	9.1.3.18	9.1.3.18	9.1.3.18	9.1.3.18		9.1.3.18
2Gb Fibre Channel Host Bus Adapters ^{1,4} (HP Branded / 3rd Party)						
A8446A / Emulex LP1060C (2Gb, PCI-X)						
FW	1.91a5	1.91a5	1.91a5	1.91a5		1.91a5
WIN 2003 SCSIport Driver	6.5.30a2	6.5.30a2	6.5.30a2	6.5.30a2		6.5.30a2
WIN 2003 StorPort Driver ^{5,7}	6.1.20a7	6.1.20a7	6.1.20a7	6.1.20a7		6.1.20a7
A7298A / Emulex LP982 (2Gb, PCI-X)						
FW	1.91a5	1.91a5	1.91a5	1.91a5		1.91a5
WIN 2003 SCSIport Driver	6.5.30a2	6.5.30a2	6.5.30a2	6.5.30a2		6.5.30a2
WIN 2003 StorPort Driver ^{5,7}	6.1.20a7	6.1.20a7	6.1.20a7	6.1.20a7		6.1.20a7
A8222A / Emulex LP9802 (2Gb, PCI-X)						
FW	1.91a5	1.91a5	1.91a5	1.91a5		1.91a5
WIN 2003 SCSIport Driver	6.5.30a2	6.5.30a2	6.5.30a2	6.5.30a2		6.5.30a2
WIN 2003 StorPort Driver ^{5,7}	6.1.20a7	6.1.20a7	6.1.20a7	6.1.20a7		6.1.20a7
SCSI Host Bus Adapters ⁸						
A7173A (Ultra320, PCI-X, 2 channel)						
✓	✓	✓	✓	✓		✓
Disk Array Multipath Support ⁴						
Windows MPIO ⁶						
✓	✓	✓	✓	✓		✓
High Availability ³						
Windows (MSCS)						
✓	✓	✓	✓	✓		✓

CLICK  to navigate to the HP product webpage

CLICK  cell to navigate to the firmware/driver download page

Red indicates a changes from last month

NOTES: section contains specific configuration details

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Matrix Version

- 5) Please reference ITV application installation/support document for specific driver and patch requirements.
- 6) Windows FullFeature MPIO software support. Clusters sharing disk and tape on the same HBA require StorPort.
- 7) All non-x86 systems running applications other than Tru64 require updated StorPort (x86/64) or K89160 (recommended).
- 8) Refer to server ConfigSpace to determine which HBAs are supported.

Darkened section indicates environment currently not supported by application

HP StorageWorks EBS Compatibility Matrix

Firmware for Virtual Library Systems / D2D Backup / Tape Libraries / Autoloaders / Tape Drive Products

Disk Storage Systems ¹		
Virtual Library Systems	Firmware	Deduplication
VLS 12000 EVA Gateway	2.2.0-100 ⁴	3.1.0-200 ^{6,7}
EVA 4000/6000/8000	6.110 ³	
EVA 4100/6100/8100	6.110 ³	
EVA 4400	9.000	
EVA 3000/5000 ²	4.100	
VLS 300 EVA Gateway	2.2.0-100 ⁴	
EVA 4000/6000/8000	6.110 ³	
EVA 4100/6100/8100	6.110 ³	
EVA 4400	9.000	
EVA 3000/5000 ²	4.100	
VLS 9000 Series	2.2.0-100 ⁴	3.1.0-200 ^{6,7}
VLS 6800 Series	1.2.0	
VLS 6600 Series	2.2.0-100 ⁴	3.1.0-200 ^{6,7}
VLS 6500 Series	2.2.0-100 ⁴	
VLS 6200 Series	2.2.0-100 ⁴	3.1.0-200 ^{6,7}
VLS 6100 Series	2.2.0-100 ⁴	
VLS 1000i Series (iSCSI)	2.6.0.228	

Disk-to-Disk Backup Systems	Firmware	Deduplication Firmware
D2D4009fc		PF89
D2D4004fc		PF89
D2D4009i (iSCSI)		PI89
D2D4004i (iSCSI)		PI89
D2D2503i (iSCSI)		AI89
D2D130 (iSCSI)	Kn7b	
D2D120 (iSCSI)	Kn7b	
D2D110 (iSCSI)	Kn7b	

Tape Storage ¹		
Enterprise Class Libraries		Firmware
HP Secure Key Manager ⁵		4.8.1
ESL E-Series		6.23
Ultrium 1840 FC	(LTO-4 FC)	H36W ⁴
Ultrium 960 FC	(LTO-3 FC)	L67W
Ultrium 460 FC	(LTO-2 FC)	K48W
Ultrium 460	(LTO-2 SCSI)	F6AW
SDLT 600	(SCSI)	v41
EML E-Series		1223
Ultrium 1840 FC	(LTO-4 FC)	H36S ⁴
Ultrium 960 FC	(LTO-3 FC)	L6CS
Ultrium 460 FC	(LTO-2 FC)	K710
Business Class Libraries		
MSL 8096		8.90
MSL 4048		6.50
MSL 2024		4.20
Ultrium 1840	(LTO-4 FC)	H44W
Ultrium 1840	(LTO-4 SCSI)	B45W
Ultrium 1760	(LTO-4 SAS HH)	U26W
Ultrium 1760	(LTO-4 SCSI HH)	W22W
Ultrium 960	(LTO-3 4Gb FC)	M63W
Ultrium 960	(LTO-3 FC)	L63W
Ultrium 960	(LTO-3 SCSI)	G63W
Ultrium 920	(LTO-3 SCSI HH)	D22W
Ultrium 920	(LTO-3 SAS HH)	C24W
Ultrium 448	(LTO-2 SCSI HH)	S63W
MSL 6000 Series		5.20
Ultrium 1840	(LTO-4 SCSI)	B45W
Ultrium 960	(LTO-3 SCSI)	G65W
Ultrium 460	(LTO-2 SCSI)	F6AW
SDLT 600	(SCSI)	v41
Tape Autoloaders		
1/8 G2 Autoloader		2.30
Ultrium 1760	(LTO-4 SAS HH)	U26W
Ultrium 1760	(LTO-4 SCSI HH)	W22W
Ultrium 920	(LTO-3 SAS HH)	C24W
Ultrium 920	(LTO-3 SCSI HH)	D22W
Ultrium 448	(LTO-2 SCSI HH)	S63W
Ultrium 232	(LTO-1 SCSI HH)	P63W

NOTES:

- 1) See "[How To Use This Document](#)" for description of support.
- 2) EVA3000/5000 support requires minimum VLS firmware version 1.2.0.
- 3) EVA 4x00/6x00/8x00 support requires minimum XCS firmware version 6.110.
- 4) Consists of Quick Restore DVD of 2.2.0 and patch level 100 ZIP file

- 5) HP Secure Key Manager (SKM) requires ESLe LTO4 drive firmware version H36W or later and EMLe LTO4 drive firmware version H36S or later and that the libraries and Interface Controllers use firmware package i231 or later. See the Interface Controller table on [Page 15](#) for the full list of firmware requirements.

- 6) See the *Advanced VLS and D2D Features* [Page 8](#) for details.

- 7) **Consists of Quick Restore DVD of 3.1.0 and patch level 200 ZIP file**

HP StorageWorks EBS Compatibility Matrix

Virtual Library Systems, D2D Backup Systems and Extended Solution Interoperability (ESI) Partner Products

Direct Attach SCSI (DAS), Direct Attach Fibre (DAF), and Storage Area Network (SAN) and iSCSI Support ¹	HP Data Protector	CA ARCserve	EMC NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec Veritas NetBackup
Virtual Library Systems	Extended Solution Interoperability (ESI) ¹					
VLS 12000 EVA Gateway EVA 4000/6000/8000 EVA 4100/6100/8100 EVA 4400 EVA 3000/5000	✓	✓ ³	✓	✓	✓	✓
VLS 300 EVA Gateway EVA 4000/6000/8000 EVA 4100/6100/8100 EVA 4400 EVA 3000/5000	✓	✓ ³	✓	✓	✓	✓
VLS 9000 Series	✓	✓ ³	✓	✓	✓	✓
VLS 6800 Series	✓	✓ ³	✓	✓	✓	✓
VLS 6600 Series	✓	✓ ³	✓	✓	✓	✓
VLS 6500 Series	✓	✓ ³	✓	✓	✓	✓
VLS 6200 Series	✓	✓ ³	✓	✓	✓	✓
VLS 6100 Series	✓	✓ ³	✓	✓	✓	✓
VLS 1000i Series ⁵ (iSCSI)	✓	✓	✓	✓ ²	✓ ⁴	✓
Disk-to-Disk Backup Systems	Compatibility information can be found at www.hp.com/go/d2d .					
D2D4009fc						
D2D4004fc						
D2D4009i (iSCSI)						
D2D4004i (iSCSI)						
D2D2503i (iSCSI)						
D2D130 (iSCSI)						
D2D120 (iSCSI)						
D2D110 (iSCSI)						

NOTES:

1) See "[How To Use This Document](#)" for description of support.

2) Configurations running an HP VLS1000i virtual tape library must use the "HP VLS1000i" emulation in order to function properly.

3) VLS software version 2.1.0 or later is required with ARCserve 11.1 or 11.5 running on Linux

See Customer Advisory "[c01181673](#)" for further details.

4) Symantec Backup Exec 10.d requires the QLA4050C-CK or QLA4050C-BK PCI-X iSCSI Host Bus Adapter to be installed in each Windows server that will connect to the VLS1000i.

5) Supported with Windows 2003 (32-bit) only using the native Microsoft iSCSI initiator or QLogic 4050c iSC

HP StorageWorks EBS Compatibility Matrix

Virtual Library Systems, D2D Backup Systems and Tape Automation Compatibility (TAC) Partner Products

Direct Attach SCSI (DAS),
Direct Attach Fibre (DAF),
Storage Area Network (SAN)
and iSCSI Support ¹

	HP Data Protector Express	HP NonStop Servers	HP File System Extender	Altempo Time Navigator	BakBone NetVault	BridgeHead HT ISM Suite	CommVault QInetix Galaxy	EMC Retrospect	Front Porch Digital DVV Archive	IBM TSM Express	Microsoft DPM 2007	NeoScale CryptoStor	NetApp Data ONTAP 7.2.x (NDMP)	QStar HSM	SGL FlashNet	Syncsort Backup Express	XenData Archive Series	Yosemite Backup	CipherMax CM140T / KeyCruiser	Clario MDS 9000 SME	Crossroads TapeSentry	Crossroads Virtual TapeServer	Crossroads ReadVerity Appliance	Decru DataFort	FalconStor VTL	Intradyn Compliance Vault	NetApp NearStore VTL Series	QStar Data Director
Virtual Library Systems	Software TAC Partners ¹														Hardware TAC Partners ¹													
VLS 12000 EVA Gateway EVA 4000/6000/8000 EVA 4100/6100/8100 EVA 4400 EVA 3000/5000			✓	✓	✓	✓						✓	✓ ⁶			✓			✓	✓								✓
VLS 300 EVA Gateway EVA 4000/6000/8000 EVA 4100/6100/8100 EVA 4400 EVA 3000/5000			✓	✓	✓	✓						✓	✓ ⁶			✓			✓	✓								✓
VLS 9000 Series			✓	✓	✓	✓	✓					✓	✓ ⁶			✓			✓	✓							✓	
VLS 6800 Series			✓	✓	✓	✓	✓					✓	✓ ⁶			✓			✓	✓							✓	
VLS 6600 Series			✓	✓	✓	✓	✓					✓	✓ ⁶			✓			✓	✓							✓	
VLS 6500 Series			✓	✓	✓	✓	✓					✓	✓ ⁶			✓			✓	✓							✓	
VLS 6200 Series			✓	✓	✓	✓	✓					✓	✓ ⁶			✓			✓	✓							✓	
VLS 6100 Series			✓	✓	✓	✓	✓					✓	✓ ⁶			✓			✓	✓							✓	
VLS 1000i Series ⁵ (iSCSI)	✓				✓	✓									✓		✓											
Disk-to-Disk Backup Systems	Software TAC Partners ¹														Hardware TAC Partners ¹													
D2D4009fc ^{4,3}																												
D2D4004fc ^{4,3}																												
D2D4009i ^{4,2} (iSCSI)	✓																											
D2D4004i ^{4,2} (iSCSI)	✓																											
D2D2503i ^{4,2} (iSCSI)	✓																											
D2D130 ⁴ (iSCSI)	✓			✓	✓		✓	✓																				
D2D120 ⁴ (iSCSI)	✓			✓	✓		✓	✓																				
D2D110 ⁴ (iSCSI)	✓			✓	✓		✓	✓																				

Indicates Partners with Archiving Solutions - See Page 13 for more detail

NOTES:

- 1) See "How To Use This Document" for description of support.
- 2) Supported with Embedded iSCSI or QLogic QLA4050 PCI-X iSCSI Initiator HBA only
- 3) SAN support only with 4 Gb FC HBAs listed in the EBS Matrix.

4) For more information go to "www.hp.com/go/connect"

5) Supported with Windows 2003 (32-bit) only using the native Microsoft iSCSI initiator or QLogic 4050c iSCSI HBA.

6) Support is with LTO emulations only.

VLS Accelerated Deduplication ²		Accelerated Deduplication requires integration with backup application and data source				
Direct Attach Fibre (DAF) and Storage Area Network (SAN) Support ¹	Minimum FW required	File System	MS Exchange (Non-MAPI)	Oracle	MS SQL Server	NDMP
Data Protector 6.0 ³	3.1.0-200	Win2003 - x86, x64, IA64 RH 3.0, 4.0, 5.0 - x86, x64 SUSE 10 - x86 HP-UX 11.11, 11.23, 11.31 Solaris 9, 10 AIX 5.3 Tru64 5.1B OVMS 8.3	Exchange 2003 File Backup Exchange 2003 Agent Backup Exchange 2007 File Backup Exchange 2007 Agent Backup	9 File Backup 10 File Backup 11 File Backup 9 RMAN Backup ⁴ 10 RMAN Backup ⁴ 11 RMAN Backup ⁴	File Backup	
Data Protector 5.5 ³	3.1.0-200	Win2003 - x86, x64, IA64 RH 3.0, 4.0, 5.0 - x86, x64 SUSE 10 - x86 HP-UX 11.11, 11.23, 11.31 Solaris 9, 10 AIX 5.3 Tru64 5.1B OVMS 8.3	Exchange 2003 File Backup Exchange 2003 Agent Backup	9 File Backup 10 File Backup 11 File Backup 9 RMAN Backup ⁴ 10 RMAN Backup ⁴ 11 RMAN Backup ⁴	File Backup	
NetBackup 6.5	3.1.0-200	Win2003 - x86, x64, IA64 RH 3.0, 4.0 - x86, x64 SUSE 10 - x86 HP-UX 11.11, 11.23 Solaris 9, 10 AIX 5.3 Tru64 5.1B	Exchange 2003 File Backup Exchange 2003 Agent Backup Exchange 2007 File Backup Exchange 2007 Agent Backup	9 File Backup 10 File Backup 11 File Backup 9 RMAN Backup ⁴ 10 RMAN Backup ⁴ 11 RMAN Backup ⁴	File Backup SQL 2005 Agent Backup	NetApp Filer Backup
NetBackup 6.0	3.1.0-200	Win2003 - x86, x64, IA64 RH 4.0 - x86, x64 SUSE 10 - x86 HP-UX 11.11, 11.23 Solaris 9, 10	Exchange 2003 File Backup Exchange 2003 Agent Backup Exchange 2007 File Backup Exchange 2007 Agent Backup	9 File Backup 10 File Backup 11 File Backup 9 RMAN Backup ⁴ 10 RMAN Backup ⁴ 11 RMAN Backup ⁴	File Backup SQL 2005 Agent Backup	NetApp Filer Backup
NetBackup 5.1	3.1.0-200	Win2003 RH 4.0, SUSE 10 HP-UX 11.11 Solaris 10	Exchange 2003 File Backup Exchange 2003 Agent Backup Exchange 2007 File Backup Exchange 2007 Agent Backup	9 File Backup 10 File Backup 11 File Backup 9 RMAN Backup ⁴ 10 RMAN Backup ⁴ 11 RMAN Backup ⁴	File Backup SQL 2005 Agent Backup	NetApp Filer Backup

D2D Dynamic Deduplication		Dynamic Deduplication does NOT require integration with backup applications
D2D4009fc	(Fibre Channel)	✓
D2D4004fc	(Fibre Channel)	✓
D2D4009i	(iSCSI)	✓
D2D4004i	(iSCSI)	✓
D2D2503i	(iSCSI)	✓
D2D130	(iSCSI)	
D2D120	(iSCSI)	
D2D110	(iSCSI)	

NOTES:

- 1) See "[How To Use This Document](#)" for description of support.
- 2) NOT supported in the VLS300, VLS1001, VLS1002, VLS6100, VLS6500 or VLS6800.
- 3) Supports 6200/6600 single node series, and up to 2-nodes on multimode VLS9000/12000 systems running minimum v3.1 code.
- 4) RMAN script modifications required to enable deduplication. See [HP StorageWorks Deduplication Solutions Guide](#) for details.

HP StorageWorks EBS Compatibility Matrix

Tape Libraries/Autoloaders and Extended Solution Interoperability (ESI) Partner Products

Direct Attach SCSI and SAS (DAS), Direct Attach Fibre (DAF), and Storage Area Network (SAN) Support ¹	HP Data Protector	CA ARCserve	EMC NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec Veritas NetBackup
Enterprise Class Libraries						
Extended Solution Interoperability (ESI) Partners ¹						
HP Secure Key Manager ⁸	✓	✓	✓	✓	✓	✓
ESL E-Series	✓	✓	✓	✓	✓	✓
Ultrium 1840 FC ⁶ (LTO-4 FC)	✓	✓	✓	✓	✓	✓
Ultrium 960 FC (LTO-3 FC)	✓	✓	✓	✓	✓	✓
Ultrium 460 FC (LTO-2 FC)	✓	✓	✓	✓	✓	✓
Ultrium 460 (LTO-2 SCSI)	✓	✓	✓	✓	✓	✓
SDLT 600 (SCSI)	✓	✓	✓	✓	✓	✓
EML E-Series	✓	✓	✓	✓	✓	✓
Ultrium 1840 FC ⁶ (LTO-4 FC)	✓	✓	✓	✓	✓	✓
Ultrium 960 FC (LTO-3 FC)	✓	✓	✓	✓	✓	✓
Ultrium 460 FC (LTO-2 FC)	✓	✓	✓	✓	✓	✓
Business Class Libraries						
MSL LTO-4 Encryption Kit ¹⁰	✓	✓	✓	✓	✓	✓
MSL 8096 ²	✓	✓	✓	✓	✓ ⁹	✓
MSL 4048 ²	✓	✓	✓	✓	✓ ⁹	✓
MSL 2024 ²	✓	✓	✓	✓	✓ ⁹	✓
Ultrium 1840 ⁶ (LTO-4 FC)	✓	✓	✓	✓	✓	✓
Ultrium 1840 ⁶ (LTO-4 SCSI)	✓	✓	✓	✓	✓	✓
Ultrium 1760 ^{3,6} (LTO-4 SAS HH)	✓	✓	✓	✓	✓	✓
Ultrium 1760 ^{6,7} (LTO-4 SCSI HH)	✓	✓	✓	✓	✓	✓
Ultrium 960 (LTO-3 4Gb FC)	✓	✓	✓	✓	✓	✓
Ultrium 960 (LTO-3 FC)	✓	✓	✓	✓	✓	✓
Ultrium 960 (LTO-3 SCSI)	✓	✓	✓	✓	✓	✓
Ultrium 920 (LTO-3 SCSI HH)	✓	✓	✓	✓	✓	✓
Ultrium 920 ³ (LTO-3 SAS HH)	✓	✓	✓	✓	✓	✓
Ultrium 448 (LTO-2 SCSI HH)	✓	✓	✓	✓	✓	✓
MSL 6000 Series	✓	✓	✓	✓	✓	✓
Ultrium 1840 ⁶ (LTO-4 SCSI)	✓	✓	✓	✓	✓	✓
Ultrium 960 (LTO-3 SCSI)	✓	✓	✓	✓	✓	✓
Ultrium 460 (LTO-2 SCSI)	✓	✓	✓	✓	✓	✓
SDLT 600 (SCSI)	✓	✓	✓	✓	✓	✓
Ultrium Tape Autoloaders ^{2,4,5}						
1/8 G2 LTO-4 Encryption Kit ¹⁰	✓	✓	✓	✓	✓	✓
1/8 G2 Autoloader	✓	✓	✓	✓	✓	✓
Ultrium 1760 ^{3,6} (LTO-4 SAS HH)	✓	✓	✓	✓	✓	✓
Ultrium 1760 ⁶ (LTO-4 SCSI HH)	✓	✓	✓	✓	✓	✓
Ultrium 920 ³ (LTO-3 SAS HH)	✓	✓	✓	✓	✓	✓
Ultrium 920 (LTO-3 SCSI HH)	✓	✓	✓	✓	✓	✓
Ultrium 448 (LTO-2 SCSI HH)	✓	✓	✓	✓	✓	✓
Ultrium 232 (LTO-1 SCSI HH)	✓	✓	✓	✓	✓	✓
Advanced Drive and Media Features						
Ultrium LTO4 Application Key Management	✓	✓		✓	✓	✓
Ultrium WORM	✓	✓	✓	✓	✓	✓
SDLT 600 WORM		✓	✓	✓	✓	✓

NOTES:

- 1) See "[How To Use This Document](#)" for description of support.
- 2) Autoloaders, MSL 2024, MSL 4048, and MSL 8096 are not supported with SMART Array Controllers.
- 3) Automation products with SAS drives must be connected using the HP SC44Ge SAS HBA.
- 4) Autoloaders are only supported in Direct Attach SCSI & SAS configurations.

- 5) Refer to EBS Design Guide for additional info on the use of native backup commands and programs.
- 6) LTO4 (Ultrium 1840 and 1760) drives support AES hardware encryption. Refer to the backup/restore application vendor for hardware encryption support details.
- 7) Supported with MSL4048 and MSL2024 only

- 8) Please refer to Customer Advisory "[c01269477](#)" for operational details.
- 9) Not supported with Symantec Backup Exec for NetWare (BENW)
- 10) USB Token for use only with LTO-4 1/8 G2 Autoloaders and MSL2024/4048/8096 Tape Libraries.**

Tape Libraries/Autoloaders and Tape Automation Compatibility (TAC) Partner Products

Direct Attach SCSI and SAS (DAS),
Direct Attach Fibre (DAF),
and Storage Area Network (SAN) Support ¹

	HP Data Protector Express	HP NonStop Servers	HP File System Extender	Attempo Time Navigator	BakBone NetVault	Bridghead HT ISM Suite	CommVault QInnex Galaxy	EMC Retrospect	Front Porch Digital DVArchive	IBM TSM Express	Microsoft DPM 2007	NeoScale CryptoStor ^{13,14}	NetApp Data ONTAP 7.2.x (NDMP)	QStar HSM	Quantum StorNext	SGI FlashNet	Synccor Backup Express	XenData Archive Series	Yosemite Backup	CipherMax CM 140T / KeyCruiser	Cisco MDS 9000 SME	Crossroads TapeServer	Crossroads Virtual TapeServer	Decru DataFort ^{13,7}	FalconStor VTL	Intradyn Compliance Vault	NetApp NearStore VTL Series	QStar Data Director
Enterprise Class Libraries																												
HP Secure Key Manager ⁹																												
ESL E-Series																												
Ultrium 1840 ⁵ (LTO-4 FC)			✓	✓	✓	✓	✓	✓	✓	✓	✓ ²	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ultrium 960 (LTO-3 FC)			✓	✓	✓	✓	✓	✓	✓	✓	✓ ²	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ultrium 460 (LTO-2 FC)			✓	✓	✓	✓	✓	✓	✓	✓	✓ ²	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ultrium 460 (LTO-2 SCSI)			✓	✓	✓	✓	✓	✓	✓	✓	✓ ²	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
SDLT 600 (SCSI)			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
EML E-Series																												
Ultrium 1840 ⁵ (LTO-4 FC)	✓ ¹¹	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓ ²	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ultrium 960 (LTO-3 FC)	✓ ¹¹	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓ ²	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ultrium 460 (LTO-2 FC)	✓ ¹¹	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓ ²	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Business Class Libraries																												
MSL LTO-4 Encryption Kit ¹⁰																												
MSL 8096 ¹⁰	✓	✓ ¹¹	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MSL 4048 ¹⁰	✓	✓ ¹¹	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MSL 2024 ¹⁰	✓	✓ ¹¹	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ultrium 1840 ⁵ (LTO-4 FC)	✓ ¹⁶				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ultrium 1840 ⁵ (LTO-4 SCSI)	✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ultrium 1760 ^{3,5} (LTO-4 SAS HH)	✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ultrium 1760 ^{6,17} (LTO-4 SCSI HH)	✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ultrium 960 (LTO-3 4Gb FC)	✓ ¹⁶	✓ ¹¹	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ultrium 960 (LTO-3 FC)	✓ ¹⁶	✓ ¹¹	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ultrium 960 (LTO-3 SCSI)	✓	✓ ¹¹	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ultrium 920 (LTO-3 SCSI HH)	✓	✓ ¹¹	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ultrium 920 ³ (LTO-3 SAS HH)	✓	✓ ¹¹	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ultrium 448 (LTO-2 SCSI HH)	✓	✓ ¹¹	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MSL 6000 Series																												
Ultrium 1840 ⁵ (LTO-4 SCSI)			✓	✓	✓	✓	✓	✓	✓	✓	✓ ¹²	✓ ¹⁵	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓ ⁸	✓	✓	✓	✓	✓
Ultrium 960 (LTO-3 SCSI)			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ultrium 460 (LTO-2 SCSI)			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓ ⁸	✓	✓	✓	✓	✓
SDLT 600 (SCSI)			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Tape Autoloaders ^{4,6,10}																												
1/8 G2 LTO-4 Encryption Kit ¹⁰																												
1/8 G2 Tape Autoloader																												
Ultrium 1760 ^{3,6} (LTO-4 SAS HH)	✓																											✓
Ultrium 1760 ⁶ (LTO-4 SCSI HH)	✓				✓		✓			✓																		✓
Ultrium 920 ³ (LTO-3 SAS HH)	✓																											✓
Ultrium 920 (LTO-3 SCSI HH)	✓									✓																		✓
Ultrium 448 (LTO-2 SCSI HH)	✓																											✓
Ultrium 232 (LTO-1 SCSI HH)	✓																											✓
Advanced Drive and Media Features																												
Ultrium LTO4 Application Key Management	✓					✓	✓													✓		✓						✓
SDLT 600 WORM	✓		✓	✓	✓	✓	✓	✓	✓			✓	✓		✓	✓	✓	✓	✓	✓		✓			✓			✓
SDLT 600 WORM			✓	✓	✓	✓	✓	✓	✓	✓																		

Indicates Partners with Archiving Solutions - See Page 13 for more detail

NOTES:

- 1) See "How To Use This Document" for description of support.
- 2) Please refer to Customer Advisory "01154679" for interoperability details.
- 3) Automation products with SAS drives must be connected using the HP SC44Ge SAS HBA.
- 4) Autoloaders are only supported in Direct Attach SCSI & SAS configurations.
- 5) LTO4 (Ultrium 1840 and 1760) drives support AES hardware encryption. Refer to the backup/restore application vendor for hardware encryption support details.
- 6) Refer to EBS Design Guide for additional info on the use of native backup commands & programs

- 7) Support is with the Decru DataFort FC-Series and S-Series for Tape only.
- 8) Support with Decru DataFort S-Series in a direct attach SCSI configuration only.
- 9) Please refer to Customer Advisory "01269477" for operational details.
- 10) Autoloaders, MSL 2024, MSL 4048, and MSL 8096 are not supported with SMART Array Controllers.
- 11) Requires connectivity of tape library to HP Virtual TapeServer for NonStop Systems.
- 12) Support is only with MSL 6026 and MSL 6030 models.

- 13) Refer to vendor for software application and additional hardware interoperability support.
- 14) Support is with the NeoScale CryptoStor Tape 700 Family only.
- 15) Not supported on Win2008
- 16) Direct Attached FC only.
- 17) Supported with MSL4048 and MSL2024 only

HP StorageWorks EBS Compatibility Matrix

Advanced Library Features

DAS, DAF, and SAN Support	HP Data Protector	CA ARCserve	EMC NetWorker	IBM Tivoli Storage	Symantec Backup Exec	Symantec Veritas NetBackup
Enterprise Libraries	IMPORTANT: See the Backup Application Details page for the latest supported versions of backup software.					
HP Secure Key Manager	✓	✓	✓	✓	✓ ⁴	✓
ESL E-Series 2 Unit Cross Link ¹	✓	✓ ³	✓	✓		✓
ESL E-Series 3-5 Unit Cross Link ¹	✓			✓		✓
ESL Mixed Media	✓	✓ ³	✓	✓	✓ ⁴	✓
ESL Library Partitioning	✓	✓ ³	✓	✓	✓ ⁴	✓
EML Library Partitioning	✓		✓	✓	✓ ⁴	✓
Midrange Libraries						
MSL G3 LTO-4 Encryption Kit (EK) ⁵	✓	✓	✓	✓	✓ ⁴	✓
1/8 G2 Autoloader Encryption Kit (EK) ⁵	✓	✓	✓	✓	✓ ⁴	✓
MSL G3 Library Partitioning	✓	✓	✓	✓	✓ ⁴	✓
MSL 6000 Multi-Unit Scalability ^{1,2}	✓	✓	✓	✓	✓ ⁴	✓
MSL 6000 Mixed Media Support	✓	✓	✓	✓	✓ ⁴	✓

NOTES:

1) Contact your ISV for scalability support.

2) MSL multi-unit scalability is with a vertical pass-through mechanism.

3) NetWare is supported with ESL libraries in a homogeneous environment only.

4) Windows support only.

5) USB Encryption Key server token for LTO-4 based Autoloaders, MSL2024, MSL4048, and MSL8096 libraries.

HP StorageWorks EBS Compatibility Matrix

Backup Application Details ¹

	HP Data Protector	CA ARCserve	EMC NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec (Windows)	Symantec Backup Exec (NetWare)	Symantec Veritas NetBackup
Partner Device Compatibility Pages ¹	Data Protector HCL	ARCserve HCL	NetWorker HCL	Tivoli Storage Manager HCL	Backup Exec HCL	Backup Exec HCL	NetBackup HCL
Recommended Tape Driver	Native Drivers	CABA Drivers	HP Drivers	Tivoli Drivers	BE Drivers	BE Drivers	HP or NBU Drivers

Latest and Minimum Application Version Support

	HP Data Protector		CA ARCserve ⁹		EMC NetWorker		IBM Tivoli Storage Manager		Symantec Backup Exec (Windows)		Symantec Backup Exec (NetWare)		Symantec Veritas NetBackup	
Enterprise Class Libraries	Latest	Minimum	Latest	Minimum	Latest	Minimum	Latest	Minimum	Latest	Minimum	Latest	Minimum	Latest	Minimum
ESL E-Series	6.0	5.0	12.0 ⁹	9.0	7.4	6.0	5.5 ⁸	5.3	12.5	9.0	9.2	9.0	6.5	4.5
EML E-Series	6.0	5.1	12.0 ⁹	9.0	7.4	7.0	5.5 ⁸	5.3	12.5	10.0			6.5	5.0
Virtual Library Systems														
VLS 12000/300 EVA Gateway	6.0	5.5	12.0 ^{7,9}	11.1 ⁷	7.4	7.0	5.5	5.3	12.5	10.0			6.5	5.0
VLS 9000 Series	6.0	5.5	12.0 ^{7,9}	11.1 ⁷	7.4	7.0	5.5	5.3	12.5	10.0			6.5	5.0
VLS 6000 Series	6.0	5.1	12.0 ^{7,9}	11.1 ⁷	7.4	7.0	5.5	5.3	12.5	10.0			6.5	5.0
VLS 1000i Series (iSCSI)	6.0	5.5	12.0 ⁹	11.5	7.4	7.0	5.5 ⁵	5.3 ⁵	12.0 ⁵	10d ⁵			6.5	5.0

Disk-to-Disk Backup Systems

D2D Backup Systems 4000 Series (Fibre Channel)
D2D Backup Systems 4000 Series (iSCSI)
D2D Backup Systems 2500 Series (iSCSI)
D2D Backup Systems 100 Series (iSCSI)

Compatibility information can be found at www.hp.com/go/d2d

Business Class Libraries

MSL 8096	6.0	5.5	12.0 ⁹	11.1	7.4	7.0	5.5	5.3	12.5	10d ^{2,4}			6.5	6.0
MSL 4048	6.0	5.1	12.0 ⁹	11.1	7.4	7.0	5.5	5.3	12.5	10d ^{2,4}			6.5	6.0
MSL 2024	6.0	5.1	12.0 ⁹	11.1	7.4	7.0	5.5	5.3	12.5	10d ^{2,4}			6.5	6.0
MSL 6000 Series	6.0	5.0	12.0 ⁹	9.0	7.4	6.0	5.5	5.3	12.5	9.0	9.2	9.0	6.5	4.5

Autoloaders

1/8 G2 Tape Autoloader (Ultrium 1760 SAS)	6.0	5.5	12.0 ⁹	11.5	7.4	7.0	5.5	5.3	12.5	10d ³	9.2	9.0	6.5	6.0
1/8 G2 Tape Autoloader (Ultrium 1760 SCSI)	6.0	5.5	12.0 ⁹	11.5	7.4	7.0	5.5	5.3	12.5	10d ³	9.2	9.0	6.5	6.0
1/8 G2 Tape Autoloader (Ultrium 920)	6.0	5.5	12.0 ⁹	11.5	7.4	7.0	5.5	5.3	12.5	10d ³	9.2	9.0	6.5	6.0
1/8 G2 Tape Autoloader (Ultrium 920 SAS)	6.0	5.5	12.0 ⁹	11.5	7.4	7.0	5.5	5.3	12.5	11d ⁴			6.5	6.0
1/8 G2 Tape Autoloader (Ultrium 448)	6.0	5.5	12.0 ⁹	11.5	7.4	7.0	5.5	5.3	12.5	10d ³	9.2 ⁶	9.0 ⁶	6.5	6.0
1/8 G2 Tape Autoloader (Ultrium 232)	6.0	5.5	12.0 ⁹	11.5	7.4	7.0	5.5	5.3	12.5	10d ³	9.2 ⁶	9.0 ⁶	6.5	6.0

NOTES:

- 1) Use the latest backup application maintenance release unless otherwise noted. Refer to the backup application vendor for specific operating system support, patches, builds, and drivers required to support HP tape automation and virtual library products.
- 2) Backup Exec version 10d and Device Driver Installer (DDI) version 20060615 or later are required.
- 3) Backup Exec version 10d and Device Driver Installer (DDI) version 20061015 or later are required.
- 4) Backup Exec version 11d and Device Driver Installer (DDI) version 20061215 or later are required.

- 5) Configurations running an HP VLS1000i virtual tape library must use the "HP VLS1000i" emulation in order to function properly.
- 6) BENW 9.x Driver SET 2 is required for Ultrium 232 and 448 1/8 G2 Autoloader support. Also, multi-LUN support must be enabled on the SCSI HBA.
- 7) VLS models 6200, 6600, and the 12000 EVA Gateway running software version 2.0.0 are not currently supported with ARCserve 11.1, 11.5 or 12 running on Linux. See Customer Advisory "[c01181673](#)" for further details.
- 8) TSM 5.4.2 or later is required to support LTO4 drives
- 9) CA ARCserve 12.0 only supports Windows based media servers.
- 10) Requires patch DP 6.0 Windows Media Agent packet DPWIN_00350 or later, available at <http://www.hp.com/go/dataprotector>.

HP StorageWorks EBS Compatibility Matrix

Archiving Solution Partners

Software Partners ¹

Application	Feature	Link to Product Page	Hardware Compatibility List
Atempo Time Navigator	Advanced protection and archival solution	Click Here	Click Here
Front Porch Digital DIVArchive	Content Storage Management system for digital media	Click Here	
Qstar HSM	Provides data archive functionality and automigration	Click Here	Click Here
Quantum StorNext	High Performance Workflow and Intelligent Archiving	Click Here	Click Here
SGL FlashNet	Content storage and archive management	Click Here	
XenData Archive Series	Powerful, scalable digital archives	Click Here	Click Here

Hardware Partners ¹

Product	Feature	Link to Product Page	Hardware Compatibility List
Intradyn ComplianceVault	Email Archiving & Retrieval Appliance	Click Here	
QSM Data Director	Real-time file system replication to protect archive data	Click Here	Click Here
Crossroads ReadVerify Appliance	Monitors and verifies readability of data written to tape	Click Here	

1) See "[How To Use This Document](#)" for description of support.

HP StorageWorks EBS Compatibility Matrix

Libraries and Interface Controllers

DAF and SAN Support		e2400-FC 4Gb (FC-FC)	e2400-FC 2Gb (FC-FC)	e2400-160 (FC-SCSI)	Native FC Connection	e1200-320 4Gb (FC-SCSI)	NSR E1200-160	NSR N1200-320 4Gb
ESL E-Series								
Ultrium 1840	(LTO-4 FC)				✓			
Ultrium 960	(LTO-3 FC)	✓	✓					
Ultrium 460	(LTO-2 FC)	✓	✓					
Ultrium 460	(LTO-2 SCSI)			✓				
SDLT600	(SCSI)			✓				
ESL E-Series Cross Link		✓	✓	✓				
Interface Manager		✓	✓	✓				
EML E-Series								
Ultrium 1840	(LTO-4 FC)				✓			
Ultrium 960	(LTO-3 FC)	✓	✓					
Ultrium 460	(LTO-2 FC)	✓	✓					
MSL G3 (8096, 4048, 2024)								
Ultrium 1840 ¹	(LTO-4 FC)				✓			
Ultrium 1840	(LTO-4 SCSI)							✓
Ultrium 1760	(LTO-4 SCSI HH)							✓
Ultrium 960 ¹	(LTO-3 4Gb FC)				✓			
Ultrium 960 ¹	(LTO-3 FC)				✓			
Ultrium 960	(LTO-3 SCSI)							✓
Ultrium 920	(LTO-3 SCSI HH)							✓
Ultrium 448	(LTO-2 SCSI HH)							✓
MSL 6000 Series								
Ultrium 1840	(LTO-4 SCSI)					✓	✓ ²	
Ultrium 960	(LTO-3 SCSI)					✓	✓	
Ultrium 460	(LTO-2 SCSI)					✓	✓	
SDLT 600	(SCSI)					✓	✓	
MSL 6000 Multi-Unit Scalability						✓	✓	

NOTES:

1) Library is controlled through tape drive and does not have a physical connection.

2) Use the e1200-320 4Gb FC interface controller for best performance. The e1200-160 is still supported, but performance will be limited.

HP StorageWorks EBS Compatibility Matrix

Interface Controller Firmware

Interface Manager Firmware Required Minimum Components	I182	I200	I220	I230	I231 ¹	I232 ¹
e2400-FC 4Gb Interface Controller (FC-FC)	5.9.28	5.9.28	5.9.29	5.9.36	5.9.3d	5.9.44
e2400-FC 2Gb Interface Controller (FC-FC)	5.9.28	5.9.28	5.9.29	5.9.36	5.9.3d	5.9.44
e2400-160 Interface Controller (FC-SCSI)	5.9.28	5.9.28	5.9.29	5.9.36	5.9.3d	5.9.44
NSR E1200-160	5.9.28	5.9.28	5.9.29	5.9.36	5.9.3d	5.9.44
ESL E-Series		5.10	6.00	6.20	6.22	6.23
EML E-Series		1126	1200	1222	1222	1223
JAVA Run Time	1.4.2	1.4.2	1.4.2	1.4.2	1.4.2	1.4.2
Command View TL	1.8.00 or 2.0.00	2.0.00	2.2.00	2.3.00	2.3.01	2.3.02

Interface Controller Firmware (Non-Interface Manager)	
e1200-320 4Gb (MSL6000)	5.9.44
N1200-320 4Gb	5.9.44

NOTES:

1) HP Secure Key Manager (SKM) requires ESL-e LTO4 drive firmware version H36W or later and EML-e LTO4 drive firmware version H36S or later and that the libraries and strongly recommends that the libraries and Interface Controllers use firmware package I232 or later.

HP StorageWorks EBS Compatibility Matrix

HP-UX (PA-RISC) ⁶

DAS, DAF, and SAN Support	HP Data Protector	CA ARCserve ¹	EMC NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec Veritas NetBackup
Operating Systems ²						
HP-UX 11.11 (11i v1)	HWE & QPK bundles, Jun 2005		HWE & QPK bundles, Dec 2007	HWE & QPK bundles, Dec 2004		HWE & QPK bundles, Dec 2007
HP-UX 11.23 (11i v2)	HWE & QPK bundles, Mar 2006		HWE & QPK bundles, Dec 2007	HWE, Jun 2006 & QPK, Mar 2006		HWE & QPK bundles, Jun 2008
HP-UX 11.31 (11i v3)	HWE & QPK bundles, Mar 2008		HWE & QPK bundles, Sep 2007 ⁷			HWE & QPK bundles, Sep 2008
Servers						
HP 9000 Superdome and Mid-Range (rp7000-rp8000 Series, PA-RISC)	✓		✓	✓		✓
HP 9000 Entry-Level (rp2000-rp5000 Series, PA-RISC)	✓		✓	✓		✓
HP A, L, N, and V Class (PA-RISC)	✓		✓	✓		✓
HP R Class (PA-RISC) ³	✓		✓	✓		✓
4Gb Fibre Channel Host Bus Adapters ⁵						
AD193A / AD194A (4G, PCI-X 2.0, Combo Card)						
FW	4.00.90		4.00.90	4.00.90		4.00.90
fcd Driver	Native		Native	Native		Native
AB379A / AB379B (4G, PCI-X 2.0)						
FW	4.00.90		4.00.90	4.00.90		4.00.90
fcd Driver	Native		Native	Native		Native
AB378A / AB378B (4G, PCI-X 2.0)						
FW	4.00.90		4.00.90	4.00.90		4.00.90
fcd Driver	Native		Native	Native		Native
2Gb Fibre Channel Host Bus Adapters ⁵						
AB465A (2G, PCI-X, Combo Card)						
FW	3.003.154		3.003.154	3.003.154		3.003.154
fcd Driver	Native		Native	Native		Native
A9782 (2G, PCI-X, Combo Card)						
FW	3.003.154		3.003.154	3.003.154		3.003.154
fcd Driver	Native		Native	Native		Native
A9784 (2G, PCI-X, Combo Card)						
FW	3.003.154		3.003.154	3.003.154		3.003.154
fcd Driver	Native		Native	Native		Native
A6826A (2G, PCI-X)						
FW	3.003.154		3.003.154	3.003.154		3.003.154
fcd Driver	Native		Native	Native		Native
A6795A (2G, PCI)						
td Driver	Native		Native	Native		Native
SCSI Host Bus Adapters ⁸						
A7173A (Ultra320, PCI-X, 2 channel)						
	Native		Native	Native		Native
AB290A (Ultra320, PCI-X, 2 channel, Combo Card)						
	Native		Native	Native		Native
Disk Array Multipath Support ⁵						
Native Multi-pathing (11i v3)	✓		✓			
Secure Path for HP-UX (11i v2, 11i v1)	3.0F SP2 patch 2		3.0F SP2 patch 2	3.0F SP2 patch 2		3.0F SP2 patch 2
High Availability ⁴						
MC/ServiceGuard	✓ ³		✓ ³			

NOTES:

- 1) SAN Media server supported with CA ARCserve 11.5 & prior. Version 12 only supports backup of LAN clients
- 2) Please reference your ISV support matrices for supported application and operating system version compatibility.
- 3) ATS is not supported.
- 4) Refer to the [EBS Design Guide](#) for details on failover configurations. For O/S's not listed, please refer to the ISV's web page for supported HA configurations.
- 5) Refer to [EBS Design Guide](#) for configuration rules and guidelines.

- 6) For Boot from Tape support, [click here](#), and select the type of tape for compatibility.
- 7) The HPUX 11.31 PHKL_36312 patch is required to support the NetWorker 7.4 CDI driver.
- 8) Refer to server QuickSpecs to determine which HBAs are supported

HP StorageWorks EBS Compatibility Matrix

HP-UX (Integrity) ⁵	DAS, DAF, and SAN Support	HP Data Protector	CA ARCserve ⁹	EMC NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec Veritas NetBackup
Operating Systems²							
HP-UX 11.23 (11i v2)		HWE & QPK bundles, Dec 2007		HWE & QPK bundles, Dec 2007	HWE & QPK bundles, Dec 2007		HWE & QPK bundles, Jun 2008
HP-UX 11.31 (11i v3)		HWE & QPK bundles, Mar 2008		HWE & QPK bundles, Sep 2008 ⁷	HWE & QPK bundles, Sep 2008		HWE & QPK bundles, Sep 2008
Servers							
HP Integrity Superdome and Mid-Range (rx7000-rx8000 Series, Integrity)		✓		✓	✓		✓
HP Integrity Entry - Level (rx1000-rx6000 Series, Integrity)		✓		✓	✓		✓
HP ProLiant c-Class BladeSystem		✓		✓	✓		✓
4Gb Fibre Channel Host Bus Adapters⁴							
AD299A / AD355A (4G, PCI-e) ⁸							
FW		2.70X5		2.70X5	2.70X5		2.70X5
fcip Driver		Native ⁸		Native ⁸	Native ⁸		Native ⁸
AD300A / QLogic QLE2462 (4G, PCI-e)							
FW		4.00.90		4.00.90	4.00.90		4.00.90
fcid Driver		Native		Native	Native		Native
AD221A / AD222A / AD393A (4G, PCI-e, Combo Card)							
FW		2.72A2		2.72A2	2.72A2		2.72A2
fcip Driver		Native⁸		Native⁸	Native⁸		Native⁸
AD193A / AD194A (4G, PCI-X 2.0, Combo Card)							
FW		4.00.90		4.00.90	4.00.90		4.00.90
fcid Driver		Native		Native	Native		Native
AB379A / AB379B (4G, PCI-X 2.0)							
FW		4.00.90		4.00.90	4.00.90		4.00.90
fcid Driver		Native		Native	Native		Native
AB378A / AB378B (4G, PCI-X 2.0)							
FW		4.00.90		4.00.90	4.00.90		4.00.90
fcid Driver		Native		Native	Native		Native
4Gb Fibre Channel HP c-Class BladeSystem Host Bus Adapters⁴							
QMH2462 (4G, PCI-e) for HP c-Class BladeSystem (403619-B21)							
FW		4.00.90		4.00.90	4.00.90		4.00.90
fcid Driver		Native		Native	Native		Native
lPe1105 (4G, PCI-e) for HP c-Class BladeSystem (403621-B21) ^{8,1}							
FW		2.72A2		2.72A2	2.72A2		2.72A2
fcip Driver		Native ^{8,1}		Native ^{8,1}	Native^{8,1}		Native ^{8,1}
2Gb Fibre Channel Host Bus Adapters⁴							
AB465A (2G, PCI-X, Combo Card)							
FW		3.003.154		3.003.154	3.003.154		3.003.154
fcid Driver		Native		Native	Native		Native
A9782 (2G, PCI-X, Combo Card)							
FW		3.003.154		3.003.154	3.003.154		3.003.154
fcid Driver		Native		Native	Native		Native
A9784 (2G, PCI-X, Combo Card)							
FW		3.003.154		3.003.154	3.003.154		3.003.154
fcid Driver		Native		Native	Native		Native
A6826A (2G, PCI-X)							
FW		3.003.154		3.003.154	3.003.154		3.003.154
fcid Driver		Native		Native	Native		Native
A6795A (2G, PCI)							
EFI		1.24		1.24	1.24		1.24
td Driver		Native		Native	Native		Native
SAS Host Bus Adapters¹⁰							
AH303A (HP SC44Ge, 3Gb, PCI-e, 4 channel)		Native		Native			Native
SCSI Host Bus Adapters¹⁰							
A7173A (Ultra320, PCI-X, 2 channel)		Native		Native	Native		Native
AB290A (Ultra320, PCI-X, 2 channel, Combo Card)		Native		Native	Native		Native
Disk Array Multipath Support⁴							
Native Multi-pathing (11i v3)		✓		✓			
Secure Path for HP-UX (11i v2, 11i v1)		3.0F SP2 patch 2		3.0F SP2 patch 2	3.0F SP2 patch 2		3.0F SP2 patch 2
High Availability⁶							
MC/ServiceGuard		✓ ³		✓ ³			

NOTES:

- 1) Supported with HP-UX 11i v3 0803 or later.
- 2) Please reference your ISV support matrices for supported application and operating system version compatibility.
- 3) ATS is not supported.

- 4) Refer to [EBS Design Guide](#) for configuration rules and guidelines.
- 5) For Boot from Tape support, [click here](#), and select the type of tape for compatibility.
- 6) Refer to the [EBS Design Guide](#) for details on failover configurations. For Operating Systems not listed, please refer to the ISV's web page for supported High Availability configurations.
- 7) The HPUX 11.31 PHKL_36312 patch is required to support the NetWorker 7.4 CDI driver

- 8) Requires FibrChanI02 driver
- 9) SAN Media server supported with CA ARCserve 11.5 & prior. Version 12 only supports backup of LAN clients
- 10) Refer to server QuickSpecs to determine which HBAs are supported

HP StorageWorks EBS Compatibility Matrix

Windows (x86) (page 1 of 3)

DAS, DAF, and SAN Support	HP Data Protector	CA ARCserve	EMC NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec Veritas NetBackup
Operating Systems ²						
Windows Server 2003 Release 2 (32-bit)	sp2	sp2	sp2	sp2	sp2	sp2
Windows Server 2008 (32-bit)	✓	✓		✓	✓	
Servers						
HP ProLiant	✓	✓	✓	✓	✓	✓
HP ProLiant c-Class BladeSystem	✓	✓	✓	✓	✓	✓
HP ProLiant p-Class BladeSystem	✓	✓	✓	✓	✓	✓
Third Party X86	✓	✓	✓	✓	✓	✓
8Gb Fibre Channel Host Bus Adapters ^{1,5} (HP Branded / 3rd Party)						
AK344A / QLogic QLE2560 (8G, PCI-e)						
AJ764A / QLogic QLE2562 (8G, PCI-e)						
BIOS	2.00	2.00	2.00	2.00	2.02	2.02
WIN 2003 StorPort Driver	9.1.6.15	9.1.6.15	9.1.6.15	9.1.7.17	9.1.7.17	9.1.7.17
WIN 2008 StorPort Driver	9.1.7.17			9.1.7.17	9.1.7.17	
81E / Emulex LPe12000 (8G, PCI-e)						
82E / Emulex LPe12002 (8G, PCI-e)						
FW						1.00a12
WIN 2003 StorPort Driver						5.2.01a4
WIN 2008 StorPort Driver						
4Gb Fibre Channel Host Bus Adapters ^{1,5} (HP Branded / 3rd Party)						
FC2142SR / Emulex LPe1150 (4G, PCI-e)						
FC2242SR DC / Emulex LPe11002 (4G, PCI-e)						
FW	2.72a2	2.72a2	2.72a2	2.72a2	2.72a2	2.72a2
WIN 2003 SCSIport Driver	5-5.30a2	5-5.30a2	5-5.30a2	5-5.30a2	5-5.30a2	5-5.30a2
WIN 2003 StorPort Driver ^{3,4}	5-2.00a12	5-2.00a12	5-2.00a12	5-2.00a12	5-2.01a4	5-2.01a4
WIN 2008 StorPort Driver ^{4,6}		5-2.00a12			5-2.01a4	
FC1142SR / QLogic QLE2460 (4G, PCI-e)						
FC1242SR DC / QLogic QLE2462 (4G, PCI-e)						
BIOS	2.02	2.02	1.26	2.02	2.02	2.02
WIN 2003 SCSIport Driver	9.1.3.11	9.1.3.11	9.1.3.11	9.1.3.11	9.1.3.11	9.1.3.11
WIN 2003 StorPort Driver ^{3,4}	9.1.3.18	9.1.3.18	9.1.3.18	9.1.3.18	9.1.7.17	9.1.7.17
WIN 2008 StorPort Driver ^{4,6}	9.1.7.17	9.1.7.17		9.1.7.17	9.1.7.17	
FC2143 / Emulex LP1150 (4G, PCI-X 2.0)						
FC2243 / Emulex LP11002 (4G, PCI-X 2.0)						
FW	2.72a2	2.72a2	2.72a2	2.72a2	2.72a2	2.72a2
WIN 2003 SCSIport Driver	5-5.30a2	5-5.30a2	5-5.30a2	5-5.30a2	5-5.30a2	5-5.30a2
WIN 2003 StorPort Driver ^{3,4}	5-2.00a12	5-2.00a12	5-2.00a12	5-2.00a12	5-2.01a4	5-2.01a4
WIN 2008 StorPort Driver ^{4,6}		5-2.00a12		5-2.00a12	5-2.01a4	
FC1143 / QLogic QLA2460 (4G, PCI-X 2.0)						
FC1243 / QLogic QLA2462 (4G, PCI-X 2.0)						
BIOS	2.02	2.02	1.26	2.02	2.02	2.02
WIN 2003 SCSIport Driver	9.1.3.11	9.1.3.11	9.1.3.11	9.1.3.11	9.1.3.11	9.1.3.11
WIN 2003 StorPort Driver ^{3,4}	9.1.3.18	9.1.3.18	9.1.3.18	9.1.3.18	9.1.7.17	9.1.7.17
WIN 2008 StorPort Driver ^{4,6}	9.1.7.17	9.1.7.17		9.1.7.17	9.1.7.17	
4Gb Fibre Channel HP c-Class BladeSystem Host Bus Adapters ⁵						
LPe1105 (4G, PCI-e) for HP c-Class BladeSystem						
FW	2.72a2	2.72a2	2.72a2	2.72a2	2.72a2	2.72a2
WIN 2003 SCSIport Driver	5-5.30a2	5-5.30a2	5-5.30a2	5-5.30a2	5-5.30a2	5-5.30a2
WIN 2003 StorPort Driver ^{3,4}	5-2.00a12	5-2.00a12	5-2.00a12	5-2.00a12	5-2.00a12	5-2.01a4
WIN 2008 StorPort Driver ^{4,6}		5-2.00a12		5-2.00a12	5-2.00a12	
QMH2462 (4G, PCI-e) for HP c-Class BladeSystem						
BIOS	1.26	1.26	1.26	1.26	1.26	2.02
WIN 2003 SCSIport Driver	9.1.3.11	9.1.3.11	9.1.3.11	9.1.3.11	9.1.3.11	9.1.3.11
WIN 2003 StorPort Driver ^{3,4}	9.1.3.18	9.1.3.18	9.1.3.18	9.1.3.18	9.1.3.18	9.1.7.17
WIN 2008 StorPort Driver ^{4,6}	9.1.6.15	9.1.6.15		9.1.6.15	9.1.6.15	

NOTES:

- 1) 3rd Party adapters require HP drivers and firmware.
- 2) Please reference your ISV support matrices for supported application and operating system version compatibility.
- 3) All non-sp2 systems running applications other than Tivoli require updated Storport.sys KB891793 (minimum) or KB916048 (recommended); systems running Tivoli require Storport.sys KB901371. All sp2 systems are required to run Storport.sys KB945119.

- 4) Please reference ISV application installation/support documents for specific driver and patch requirements.
- 5) Refer to [EBS Design Guide](#) for configuration rules and guidelines.
- 6) Systems running Tivoli with WS2008 require Storport.sys KB953390.

HP StorageWorks EBS Compatibility Matrix

Windows (x86) (page 2 of 3)

DAS, DAF, and SAN Support	HP Data Protector	CA ARCserve	EMC NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec Veritas NetBackup
2Gb Fibre Channel Host Bus Adapters ^{1, 2} (HP Branded / 3rd Party)						
A7560A / Emulex LP1050EX (2G, PCI-X)						
A7388A / Emulex LP1050 (2G, PCI-X)						
A7387A / Emulex LP1050DC (2G, PCI-X)						
FW	1.91a5	1.91a5	1.91a5	1.91a5	1.91a5	1.91a5
WIN 2003 SCSIport Driver	5-5.30a2	5-5.30a2	5-5.30a2	5-5.30a2	5-5.30a2	5-5.30a2
WIN 2003 StorPort Driver ^{5, 6}	5-2.00a12	5-2.00a12	5-2.00a12	5-2.00a12	5-2.00a12	5-2.00a12
WIN 2008 StorPort Driver ^{6, 11}		5-2.00a12		5-2.00a12	5-2.00a12	
FCA2408 / Emulex LP982 (2G, PCI-X)						
FCA2404 / Emulex LP9802 (2G, PCI-X)						
FCA2404DC / Emulex LP9802DC (2G, PCI-X)						
FW	1.91a5	1.91a5	1.91a5	1.91a5	1.91a5	1.91a5
WIN 2003 SCSIport Driver	5-5.30a2	5-5.30a2	5-5.30a2	5-5.30a2	5-5.30a2	5-5.30a2
WIN 2003 StorPort Driver ^{5, 6}	5-2.00a12	5-2.00a12	5-2.00a12	5-2.00a12	5-2.01a4	5-2.01a4
WIN 2008 StorPort Driver ^{6, 11}		5-2.00a12		5-2.00a12	5-2.01a4	
FCA2101 / Emulex LP952 (2G, PCI-X)						
FCA2355 / Emulex LP9002DC (2G, PCI-X)						
FW	3.93a0	3.93a0	3.93a0	3.93a0	3.93a0	3.93a0
WIN 2003 SCSIport Driver	5-5.30a2	5-5.30a2	5-5.30a2	5-5.30a2	5-5.30a2	5-5.30a2
WIN 2003 StorPort Driver ^{5, 6}	5-2.00a12	5-2.00a12	5-2.00a12	5-2.00a12	5-2.00a12	
FCA2214 / QLogic QLA2340 (2G, PCI-X)						
FCA2214DC / QLogic QLA2342 (2G, PCI-X)						
FW	1.45	1.45	1.45	1.45	1.45	1.45
WIN 2003 SCSIport Driver	9.1.3.11	9.1.3.11	9.1.3.11	9.1.3.11	9.1.3.11	9.1.3.11
WIN 2003 StorPort Driver ^{5, 6}	9.1.7.17	9.1.7.17	9.1.7.17	9.1.7.17	9.1.7.17	9.1.7.17
WIN 2008 StorPort Driver ^{6, 11}	9.1.7.17	9.1.7.17	9.1.7.17	9.1.7.17	9.1.7.17	
2Gb Fibre Channel HP p-Class BladeSystem Host Bus Adapters						
Emulex Mezzanine Card for p-Class Blades (2G, PCI-X)						
FW	1.91a5	1.91a5	1.91a5	1.91a5	1.91a5	1.91a5
WIN 2003 SCSIport Driver	5-5.30a2	5-5.30a2	5-5.30a2	5-5.30a2	5-5.30a2	5-5.30a2
WIN 2003 StorPort Driver ^{5, 6}	5-2.00a12	5-2.00a12	5-2.00a12	5-2.00a12	5-2.00a12	5-2.00a12
WIN 2008 StorPort Driver ^{6, 11}		5-2.00a12		5-2.00a12	5-2.00a12	
QLogic Balcony Card for p-Class Blades (2G, PCI-X)						
QLogic Mezzanine Card for p-Class Blades (2G, PCI-X)						
FW (BL25p)	1.48	1.48	1.48	1.48	1.48	1.48
FW (BL20p, BL30p, and BL35p)	1.48	1.48	1.48	1.48	1.48	1.48
WIN 2003 SCSIport Driver	9.1.3.11	9.1.3.11	9.1.3.11	9.1.3.11	9.1.3.11	9.1.3.11
WIN 2003 StorPort Driver ^{5, 6}	9.1.3.18	9.1.3.18	9.1.3.18	9.1.3.18	9.1.3.18	9.1.3.18
WIN 2008 StorPort Driver ^{6, 11}	9.1.6.15	9.1.6.15		9.1.6.15	9.1.6.15	
SAS Host Bus Adapters ^{8, 9, 10}						
416096-B21 (HP SC44Ge, 3Gb, PCI-e, 4 channel) ³	✓	✓	✓		✓	✓
SCSI Host Bus Adapters ^{8, 9, 10}						
AH627A (HP U320e, Ultra320, PCI-e, 2 channel)	✓	✓	✓	✓	✓	✓
412911-B21 (HP SC11Xe, Ultra320, PCI-e, 1 channel)	✓	✓	✓	✓	✓	✓
374654-B21 (Ultra320, PCI-X, 1 channel)	✓	✓	✓	✓	✓	✓
SCSI - Third Party HBAs and Integrated Controllers ^{4, 7}						
Adaptec 29320ALP-R (Ultra320, PCI-X, 1 channel)	✓	✓	✓	✓	✓	✓
ATTOTech UL4D (Ultra320, PCI-X, 2 channel)	✓	✓	✓	✓	✓	✓
ATTOTech UL5D (Ultra320, PCI-e, 2 channel)	✓	✓	✓	✓	✓	✓

NOTES:

1) Refer to [EBS Design Guide](#) for configuration rules and guidelines.

2) 3rd Party adapters require HP drivers and firmware.

3) SC44Ge (416096-B21) also supports the PCI Expansion Blade (448018-B21)

4) Third Party SCSI HBA support is for HP servers only

5) All sp2 systems are required to run Storport.sys KB945119. Non-sp2 systems running applications other than TSM require Storport.sys KB891793 (min) or KB916048 (recommended); systems running TSM require Storport.sys KB90

6) Please reference ISV application installation/support documents for specific driver and patch requirements.

7) See vendor website for additional details.

8) Refer to server QuickSpecs to determine which HBAs are supported

9) Third party x86 servers supported with HP-branded adapters only

10) SMART Array Controllers do not support attachment to tape automation products

11) Systems running TSM on WS2008 require Storport.sys KB953390.

HP StorageWorks EBS Compatibility Matrix

Windows (x86) (page 3 of 3)

DAS, DAF, and SAN Support	HP Data Protector	CA ARCserve	EMC NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec Veritas NetBackup
Disk Array Multipath Support ¹						
Windows MPIO ⁵	✓	✓	✓	✓	✓	✓
High Availability ²						
Windows (MSCS)	✓	✓	✓	✓ ³	✓ ⁴	✓

NOTES:

1) Refer to [EBS Design Guide](#) for configuration rules and guidelines.

2) Refer to the [EBS Design Guide](#) for details on failover configurations. For Operating Systems not listed, please refer to the ISV's web page for supported High Availability configurations.

3) Not supported with TSM 5.3.x or later.

4) Support includes NAS9000 and NAS4000 platforms.

5) Windows Full-Feature MPIO failover support. Clusters sharing disk and tape on the same HBA require StorPort.

HP StorageWorks EBS Compatibility Matrix

Windows (Integrity)

DAS, DAF, and SAN Support	HP Data Protector	CA ARCserve	EMC NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec Veritas NetBackup
Operating Systems ²						
Windows Server 2003 (64-bit)	sp2	sp2	sp2	sp2		sp2
Windows Server 2008 (64-bit)	✓			✓		
Servers						
HP Integrity Superdome and Mid-Range (rx7000-rx8000 Series, Integrity)	✓	✓	✓	✓		✓
HP Integrity Entry-Level (rx1000-rx6000 Series, Integrity)	✓	✓	✓	✓		✓
4Gb Fibre Channel Host Bus Adapters ^{1, 4} (HP Branded / 3rd Party)						
LPe1105 (4G, PCI-e) for HP c-Class BladeSystem						
FW	2.72a2	2.72a2	2.72a2	2.72a2		2.72a2
WIN 2003 StorPort Driver ^{5,7}	6-2.00a12	6-2.00a12	6-2.00a12	6-2.00a12		6-2.00a12
WIN 2008 StorPort Driver ^{5,9}	6-2.01a4			6-2.01a4		
A8002A / Emulex LPe1150 (4G, PCI-e) A8003A / Emulex PLe11002 (4G, PCI-e)						
FW	2.72a2	2.72a2	2.72a2	2.72a2		2.72a2
WIN 2003 StorPort Driver ^{5,7}	6-2.00a12	6-2.00a12	6-2.00a12	6-2.00a12		6-2.00a12
WIN 2008 StorPort Driver ^{5,9}	6-2.01a4			6-2.01a4		
AE311A / QLogic QLE2460 (4G, PCI-e) AD300A / QLogic QLE2462 (4G, PCI-e)						
EFI	1.09	1.09	1.09	1.09		1.09
WIN 2003 StorPort Driver ^{5,7}	9.1.3.18	9.1.3.18	9.1.3.18	9.1.3.18		9.1.3.18
AD167A / Emulex LP1150 (4G, PCI-X 2.0) AD168A / Emulex LP11002 (4G, PCI-X 2.0)						
FW	2.72a2	2.72a2	2.72a2	2.72a2		2.72a2
WIN 2003 SCSIport Driver	6-5.30a2	6-5.30a2	6-5.30a2	6-5.30a2		6-5.30a2
WIN 2003 StorPort Driver ^{5,7}	6-2.00a12	6-2.00a12	6-2.00a12	6-2.00a12		6-2.00a12
WIN 2008 StorPort Driver ^{5,9}	6-2.01a4			6-2.01a4		
AB429A / Qlogic QLA2460 (4G, PCI-X 2.0) AB379A/B / Qlogic QLA2462 (4G, PCI-X 2.0)						
EFI	1.09	1.09	1.09	1.09		1.09
WIN 2003 StorPort Driver ^{5,7}	9.1.3.18	9.1.3.18	9.1.3.18	9.1.3.18		9.1.3.18
2Gb Fibre Channel Host Bus Adapters ^{1, 4} (HP Branded / 3rd Party)						
AB232A / Emulex LP9802 (2G, PCI-X) AB467A / Emulex LP1050 (2G, PCI-X) AB466A / Emulex LP1050DC (2G, PCI-X)						
FW	1.91a5	1.91a5	1.91a5	1.91a5		1.91a5
WIN 2003 SCSIport Driver	6-5.30a2	6-5.30a2	6-5.30a2	6-5.30a2		6-5.30a2
WIN 2003 StorPort Driver ^{5,7}	6-1.20a7	6-1.20a7	6-1.20a7	6-2.01a4		6-1.20a7
SCSI Host Bus Adapters ⁸						
A7173A (Ultra320, PCI-X, 2 channel)	✓	✓	✓	✓		✓
Disk Array Multipath Support ⁴						
Windows MPIO ⁶	✓	✓	✓	✓		✓
High Availability ³						
Windows (MSCS)	✓	✓	✓	✓		✓

NOTES:

- 1) 3rd Party adapters require HP drivers and firmware.
- 2) Please reference ISV support matrices for supported application and OS version compatibility.
- 3) Refer to the [EBS Design Guide](#) for details on failover configurations. For Operating Systems not listed, please refer to the ISV's web page for supported High Availability configurations.

- 4) Refer to [EBS Design Guide](#) for configuration rules and guidelines.
- 5) Please reference ISV application documents for specific driver and patch requirements.
- 6) Windows Full-Feature MPIO failover support. Clusters sharing disk and tape on the same HBA require StorPort.

- 7) All sp2 systems require Storport.sys KB945119. Non-sp2 systems running applications other than TSM require Storport.sys KB891793 (min) or KB916048 (recommended) while systems running TSM require Storport.sys KB901371
- 8) Refer to server QuickSpecs to determine which HBAs are supported
- 9) Systems running Tivoli with WS2008 requires Storport.sys KB953390.

HP StorageWorks EBS Compatibility Matrix

Windows (x64) (page 1 of 2)

DAS, DAF, and SAN Support	HP Data Protector	CA ARCserve	EMC NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec Veritas NetBackup
Operating Systems ²						
Windows Server 2003 x64 Edition	sp2	sp2	sp2	sp2	sp2	sp2
Windows Server 2003 R2 x64 Edition	sp2	sp2	sp2	sp2	sp2	sp2
Windows Server 2008 x64 Edition	✓	✓		✓	✓	✓
Servers						
HP ProLiant	✓	✓	✓	✓	✓	✓
HP ProLiant c-Class BladeSystem	✓	✓	✓	✓	✓	✓
HP ProLiant p-Class BladeSystem	✓	✓	✓	✓	✓	✓
8Gb Fibre Channel Host Bus Adapters ^{4,5} (HP Branded / 3rd Party)						
AK344A / QLogic QLE2560 (8G, PCI-e)						
AJ764A / QLogic QLE2562 (8G, PCI-e)						
BIOS	2.00	2.00	2.00	2.00	2.02	2.02
WIN 2003 StorPort Driver	9.1.6.15	9.1.6.15	9.1.6.15	9.1.7.17	9.1.7.17	9.1.7.17
WIN 2008 StorPort Driver	9.1.7.17			9.1.7.17	9.1.7.17	
81E / Emulex LPe12000 (8G, PCI-e)						
82E / Emulex LPe12002 (8G, PCI-e)						
FW						1.00a12
WIN 2003 StorPort Driver ^{1,6}						7-2.01a4
WIN 2008 StorPort Driver ^{1,7}						7-2.01a4
4Gb Fibre Channel Host Bus Adapters ^{4,5} (HP Branded / 3rd Party)						
FC2142SR / Emulex LPe1150 (4G, PCI-e)						
FC2242SR DC / Emulex LPe11002 (4G, PCI-e)						
FW	2.72a2	2.72a2	2.72a2	2.72a2	2.72a2	2.72a2
WIN 2003 StorPort Driver ^{1,6}	7-2.00a12	7-2.00a12	7-2.00a12	7-2.00a12	7-2.01a4	7-2.01a4
WIN 2008 StorPort Driver ^{1,7}		7-2.00a12		7-2.00a12	7-2.01a4	7-2.01a4
FC1142SR / QLogic QLE2460 (4G, PCI-e)						
FC1242SR DC / QLogic QLE2462 (4G, PCI-e)						
BIOS	2.02	2.02	1.26	2.02	2.02	2.02
WIN 2003 StorPort Driver ^{1,6}	9.1.3.18	9.1.3.18	9.1.3.18	9.1.3.18	9.1.7.17	9.1.7.17
WIN 2008 StorPort Driver ^{1,7}	9.1.7.17	9.1.7.17		9.1.7.17	9.1.7.17	9.1.7.17
FC2143 / Emulex LP1150 (4G, PCI-X 2.0)						
FC2243 / Emulex LP11002 (4G, PCI-X 2.0)						
FW	2.72a2	2.72a2	2.72a2	2.72a2	2.72a2	2.72a2
WIN 2003 StorPort Driver ^{1,6}	7-2.00a12	7-2.00a12	7-2.00a12	7-2.00a12	7-2.01a4	7-2.01a4
WIN 2008 StorPort Driver ^{1,7}		7-2.00a12		7-2.00a12	7-2.01a4	7-2.01a4
FC1143 / QLogic QLA2460 (4G, PCI-X 2.0)						
FC1243 / QLogic QLA2462 (4G, PCI-X 2.0)						
BIOS	2.02	2.02	1.26	2.02	2.02	2.02
WIN 2003 StorPort Driver ^{1,6}	9.1.3.18	9.1.3.18	9.1.3.18	9.1.3.18	9.1.7.17	9.1.7.17
WIN 2008 StorPort Driver ^{1,7}	9.1.7.17	9.1.7.17		9.1.7.17	9.1.7.17	9.1.7.17
4Gb HP c-Class BladeSystem Fibre Channel Host Bus Adapters ⁴						
LPe1105 (4G, PCI-e) for HP c-Class BladeSystem						
FW	2.72a2	2.72a2	2.72a2	2.72a2	2.72a2	2.72a2
WIN 2003 StorPort Driver ^{1,6}	7-2.00a12	7-2.00a12	7-2.00a12	7-2.00a12	7-2.00a12	7-2.01a4
WIN 2008 StorPort Driver ^{1,7}		7-2.00a12		7-2.00a12	7-2.00a12	7-2.01a4
QMH2462 (4G, PCI-e) for HP c-Class BladeSystem						
BIOS	1.26	1.26	1.26	1.26	1.26	2.02
WIN 2003 StorPort Driver ^{1,6}	9.1.3.18	9.1.3.18	9.1.3.18	9.1.3.18	9.1.3.18	9.1.7.17
WIN 2008 StorPort Driver ^{1,7}	9.1.7.17	9.1.6.15		9.1.6.15	9.1.6.15	9.1.7.17

NOTES:

- 1) Please reference ISV application installation/support documents for specific driver and patch requirements.
- 2) Please reference your ISV support matrices for supported application and operating system version compatibility.
- 3) Refer to the [EBS Design Guide](#) for details on failover configurations. For Operating Systems not listed, please refer to the ISV's web page for supported High Availability configurations.

- 4) Refer to [EBS Design Guide](#) for configuration rules and guidelines.
- 5) 3rd Party adapters require HP drivers and firmware.
- 6) All non-sp2 systems running applications other than Tivoli require updated Storport.sys KB903081 (minimum) or KB916048 (recommended); systems running Tivoli require Storport.sys KB901371. All sp2 systems are required to run Storport.sys KB945119.
- 7) Systems running Tivoli with WS2008 require Storport.sys KB953390.

HP StorageWorks EBS Compatibility Matrix

Windows (x64) (page 2 of 2)

DAS, DAF, and SAN Support	HP Data Protector	CA ARCserve	EMC NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec Veritas NetBackup
2Gb Fibre Channel Host Bus Adapters ^{4,5} (HP Branded / 3rd Party)						
7560A / Emulex LP1050EX (2G, PCI-X) A7388A / Emulex LP1050 (2G, PCI-X) A7387A / Emulex LP1050DC (2G, PCI-X)						
FW	1.91a5	1.91a5	1.91a5	1.91a5	1.91a5	1.91a5
WIN 2003 StorPort Driver ^{1, 6}	7-2.00a12	7-2.00a12	7-2.00a12	7-2.00a12	7-2.00a12	7-2.00a12
WIN 2008 StorPort Driver ^{1, 13}		7-2.00a12		7-2.00a12	7-2.00a12	
FCA2408 / Emulex LP982 (2G, PCI-X) FCA2404 / Emulex LP9802 (2G, PCI-X) FCA2404DC / Emulex LP9802DC (2G, PCI-X)						
FW	1.91a5	1.91a5	1.91a5	1.91a5	1.91a5	1.91a5
WIN 2003 StorPort Driver ^{1, 6}	7-2.00a12	7-2.00a12	7-2.00a12	7-2.00a12	7-2.00a12	7-2.01a4
WIN 2008 StorPort Driver ^{1, 13}		7-2.00a12		7-2.00a12	7-2.00a12	7-2.01a4
2Gb HP p-Class BladeSystem Fibre Channel Host Bus Adapters ⁴						
QLogic Balcony Card for p-Class Blades (2G, PCI-X) QLogic Mezzanine Card for p-Class Blades (2G, PCI-X)						
FW (BL25p)	1.48	1.48	1.48	1.48	1.48	1.48
FW (BL20p, BL30p, and BL35p)	1.48	1.48	1.48	1.48	1.48	1.48
WIN 2003 StorPort Driver ^{1, 6}	9.1.3.18	9.1.3.18	9.1.3.18	9.1.3.18	9.1.3.18	9.1.3.18
WIN 2008 StorPort Driver ^{1, 13}	9.1.6.15	9.1.6.15		9.1.6.15	9.1.6.15	
SAS Host Bus Adapters ^{8, 9, 10}						
416096-B21 (HP SC44Ge, 3Gb, PCI-e, 4 channel) ¹¹	✓	✓	✓		✓	✓
SCSI Host Bus Adapters ^{8, 9, 10}						
AH627A (HP U320e, Ultra320, PCI-e, 2 channel)	✓	✓	✓	✓	✓	✓
412911-B21 (HP SC11Xe, Ultra320, PCI-e, 1 channel)	✓	✓	✓	✓	✓	✓
374654-B21 (Ultra320, PCI-X, 1 channel)	✓	✓	✓	✓	✓	✓
SCSI - Third Party HBAs and Integrated Controllers ^{7, 12}						
Adaptec 29320ALP-R (Ultra320, PCI-X, 1 channel)	✓	✓	✓	✓	✓	✓
ATTOTech UL4D (Ultra320, PCI-X, 2 channel)	✓	✓	✓	✓	✓	✓
ATTOTech UL5D (Ultra320, PCI-e, 2 channel)	✓	✓	✓	✓	✓	✓
Disk Array Multipath Support ⁴						
Windows MPIO	✓	✓	✓	✓	✓	✓
High Availability ³						
Windows (MSCS)	✓	✓	✓	✓	✓	✓

NOTES:

- 1) Please reference ISV application installation/support documents for specific driver and patch requirements.
- 2) Please reference your ISV support matrices for supported application and operating system version compatibility.
- 3) Refer to the [EBS Design Guide](#) for details on failover configurations. For Operating Systems not listed, please refer to the ISV's web page for supported High Availability configurations.
- 4) Refer to [EBS Design Guide](#) for configuration rules and guidelines.
- 5) 3rd Party adapters require HP drivers and firmware.
- 6) All non-sp2 systems running applications other than Tivoli require updated Storport.sys KB903081 (minimum) or KB916048 (recommended); systems running Tivoli require Storport.sys KB901371. All sp2 systems are required to run Storport.sys KB945119.
- 7) See vendor website for additional details.
- 8) Refer to server QuickSpecs to determine which HBAs are supported
- 9) Third party x86 servers supported with HP-branded adapters only
- 10) SMART Array Controllers do not support attachment to tape automation products
- 11) SC44Ge also supports the PCI Expansion Blade (448018-B21)
- 12) Third Party SCSI HBA support is for HP servers only
- 13) Systems running TSM on WS2008 require Storport.sys KB95339I

HP StorageWorks EBS Compatibility Matrix

Linux (x86) ^{4,6} (page 1 of 2)

DAS, DAF, and SAN Support	HP Data Protector	CA ARCserve ¹	EMC NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec Veritas NetBackup
Operating Systems ²						
RHEL [AS/ES/WVS] 4.0 (32-bit)	Update 7		Update 7	Update 7		Update 7
RHEL [AS/ES/WVS] 5.0 (32-bit)	✓		✓	✓	Update 2	
SUSE SLES 9 (32-bit)	SP4		SP4	SP4		SP4
SUSE SLES 10 (32-bit)	SP1		SP1	SP1	SP2	SP2
Servers						
HP ProLiant	✓		✓	✓	✓	✓
HP ProLiant c-Class BladeSystem	✓		✓	✓	✓	✓
HP ProLiant p-Class BladeSystem	✓		✓	✓	✓	✓
Third Party X86	✓		✓	✓	✓	✓
8Gb Fibre Channel Host Bus Adapters ^{3,5} (HP Branded / 3rd Party)						
AK344A / QLogic QLE2560 (8G, PCI-e)						
AJ764A / QLogic QLE2562 (8G, PCI-e)						
BIOS	2.00		2.00	2.00	2.02	2.02
RHEL 4.0 driver & SUSE SLES 9 driver						8.02.11
RHEL 5.0 driver & SUSE SLES 10 driver	8.02.03		8.02.03	8.02.03	8.02.11	8.02.11
81E / Emulex LPe12000 (8G, PCI-e)						
82E / Emulex LPe12002 (8G, PCI-e)						
FW					1.00a12	1.00a12
RHEL 4.0 driver & SUSE SLES 9 driver						8.0.16.40
RHEL 5.0 driver & SUSE SLES 10 driver					8.2.0.22_p1	8.2.0.22_p1
4Gb Fibre Channel Host Bus Adapters ^{3,5} (HP Branded / 3rd Party)						
FC2142SR / Emulex LPe1150 (4G, PCI-e)						
FC2242SR DC / Emulex LPe11002-M4 (4G, PCI-e)						
FW	2.70a5		2.70a5	2.70a5	2.72a2	2.72a2
RHEL 4.0 driver & SUSE SLES 9 driver	8.0.16.32		8.0.16.32	8.0.16.32		8.0.16.40
RHEL 5.0 driver & SUSE SLES 10 driver	8.1.6.7		8.1.6.7	8.1.6.7	8.2.0.22_p1	8.2.0.22_p1
FC1142SR / QLogic QLE2460 (4G, PCI-e)						
FC1242SR DC / QLE2462 (4G, PCI-e)						
BIOS	1.26		1.26	1.26	2.02	2.02
RHEL 4.0 driver & SUSE SLES 9 driver	8.01.07.25		8.01.07.25	8.01.07.25		8.02.11
RHEL 5.0 driver & SUSE SLES 10 driver	8.01.07.25		8.01.07.25	8.01.07.25	8.02.11	8.02.11
FC2143 / Emulex LP1150 (4G, PCI-X 2.0)						
FC2243 / Emulex LP11002 (4G, PCI-X 2.0)						
FW	2.70a5		2.70a5	2.70a5	2.72a2	2.72a2
RHEL 4.0 driver & SUSE SLES 9 driver	8.0.16.32		8.0.16.32	8.0.16.32		8.0.16.40
RHEL 5.0 driver & SUSE SLES 10 driver	8.1.6.7		8.1.6.7	8.1.6.7	8.2.0.22_p1	8.2.0.22_p1
FC1143 / QLogic QLA2460 (4G, PCI-X 2.0)						
FC1243 / QLogic QLA2462 (4G, PCI-X 2.0)						
BIOS	1.26		1.26	1.26	2.02	2.02
RHEL 4.0 driver & SUSE SLES 9 driver	8.01.07.25		8.01.07.25	8.01.07.25		8.02.11
RHEL 5.0 driver & SUSE SLES 10 driver	8.01.07.25		8.01.07.25	8.01.07.25	8.02.11	8.02.11

NOTES:

- 1) SAN Media server supported with CA ARCserve 11.5 & prior. Version 12 only supports backup of LAN clients
- 2) Please reference your ISV support matrices for supported application and operating system version compatibility.

- 3) Refer to [EBS Design Guide](#) for configuration rules and guidelines.
- 4) EBS is not dependent on specific kernel errata levels. For required/supported kernel errata, refer to your online storage array and backup application support documentation.

- 5) 3rd Party adapters require HP drivers and firmware.
- 6) Due to tape device discovery issues, SP2 for SLES 9 is not supported.

HP StorageWorks EBS Compatibility Matrix

Linux (x86) ^{4,6} (page 2 of 2)

DAS, DAF, and SAN Support	HP Data Protector	CA ARCserve ¹	EMC NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec Veritas NetBackup
4Gb HP c-Class BladeSystem Fibre Channel Host Bus Adapters ^{3,5}						
LPe1105 (4G, PCI-e) for HP c-Class BladeSystem						
FW	2.70a5		2.70a5	2.70a5	2.72a2	2.72a2
RHEL 4.0 driver & SUSE SLES 9 driver	8.0.16.32		8.0.16.32	8.0.16.32		8.0.16.40
RHEL 5.0 driver & SUSE SLES 10 driver	8.1.6.7		8.1.6.7	8.1.6.7	8.2.0.22_p1	8.2.0.22_p1
QMH2462 (4G, PCI-e) for HP c-Class BladeSystem						
BIOS	1.26		1.26	1.26	2.02	2.02
RHEL 4.0 driver & SUSE SLES 9 driver	8.01.07.25		8.01.07.25	8.01.07.25		8.02.11
RHEL 5.0 driver & SUSE SLES 10 driver	8.01.07.25		8.01.07.25	8.01.07.25	8.02.11	8.02.11
2Gb Fibre Channel Host Bus Adapters ^{3,5} (HP Branded / 3rd Party)						
FCA2214 / QLogic 2340 (2G, PCI-X)						
FCA2214DC / QLogic 2342 (2G, PCI-X)						
BIOS	1.45		1.45	1.45	1.45	1.45
RHEL 4.0 driver & SUSE SLES 9 driver	8.01.07.25		8.01.07.25	8.01.07.25		8.02.11
RHEL 5.0 driver & SUSE SLES 10 driver	8.01.07.25		8.01.07.25	8.01.07.25	8.02.11	8.02.11
2Gb HP p-Class BladeSystem Fibre Channel Host Bus Adapters ^{3,5}						
Emulex Mezzanine Card for p-Class Blades (2G, PCI-X)						
FW	1.91a5		1.91a5	1.91a5	1.91a5	1.91a5
RHEL 4.0 driver & SUSE SLES 9 driver	8.0.16.32		8.0.16.32	8.0.16.32		8.0.16.32
RHEL 5.0 driver & SUSE SLES 10 driver	8.1.6.7		8.1.6.7	8.1.6.7	8.1.6.7	8.1.6.7
QLogic Balcony Card for p-Class Blades (2G, PCI-X)						
QLogic Mezzanine Card for BL20p G2/G3 (2G, PCI-X)						
FW (BL25p)	1.48		1.48	1.48	1.48	1.48
FW (BL20p, BL30p, and BL35p)	1.48		1.48	1.48	1.48	1.48
RHEL 4.0 driver & SUSE SLES 9 driver	8.01.07.25		8.01.07.25	8.01.07.25		8.01.07.25
RHEL 5.0 driver & SUSE SLES 10 driver	8.01.07.25		8.01.07.25	8.01.07.25	8.01.07.25	8.01.07.25
SAS Host Bus Adapters ^{8, 9, 10}						
416096-B21 (HP SC44Ge, 3Gb, PCI-e, 4 channel) ¹¹	✓		✓			✓
SCSI Host Bus Adapters ^{8, 9, 10}						
AH627A (HP U320e, Ultra320, PCI-e, 2 channel)	✓		✓	✓		✓
412911-B21 (HP SC11Xe, Ultra320, PCI-e, 1 channel)	✓		✓	✓		✓
374654-B21 (Ultra320, PCI-X, 1 channel)	✓		✓	✓		✓
SCSI - Third Party HBAs and Integrated Controllers ^{7, 2}						
Adaptec 29320ALP-R (Ultra320, PCI-X, 1 channel)	✓		✓	✓		✓
ATTOTech UL4D (Ultra320, PCI-X, 2 channel)	✓		✓	✓		✓
ATTOTech UL5D (Ultra320, PCI-e, 2 channel)	✓		✓	✓		✓
Disk Array Multipath Support ³						
Device Mapper				4.0.0	4.0.1	
Emulex Multipulse (2.6 kernels only)	2.1.9		2.1.9	2.1.9	2.2.20	2.2.20
QLogic Native Multi-Path for Linux (2.4 kernel)	7.07.05		7.07.05	7.07.05		7.07.05
QLogic Native Multi-Path for Linux (2.6 kernel)	8.01.07.25		8.01.07.25	8.01.07.25	8.01.07.25	8.01.07.25

NOTES:

1) SAN Media server supported with CA ARCserve 11.5 & prior.

Version 12 only supports backup of LAN clients

2) Third Party SCSI HBA support is for HP servers only

3) Refer to [EBS Design Guide](#) for configuration rules and guidelines.

4) EBS is not dependent on specific kernel errata levels. For required/supported kernel errata, refer to your online storage array and backup application support documentation.

5) 3rd Party adapters require HP drivers and firmware.

6) SP2 for SLES 9 is not supported.

7) See vendor website for additional details.

8) Refer to server QuickSpecs to determine HBA supported

9) Third party x86 servers supported with HP-branded adapters only

10) SMART Array Controllers do not support attachment to tape automation products

11) SC44Ge (416096-B21) also supports the PCI Expansion Blade (448018-B21)

HP StorageWorks EBS Compatibility Matrix

Linux (Integrity)^{3,5}

DAS, DAF, and SAN Support	HP Data Protector	CA ARCserve ¹	EMC NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec Veritas NetBackup
Operating Systems²						
RHEL [AS/ES/WS] 4.0 (64-bit)	Update 7		Update 7			Update 7
RHEL [AS/ES/WS] 5.0 (64-bit)	Update 1		Update 2			
SUSE SLES 9 (64-bit)	SP4		SP4			SP4
SUSE SLES 10 (64-bit)	SP1					SP1
Servers						
HP Integrity Superdome and Mid-Range (rx7000-rx8000 Series, Integrity)	✓		✓			✓
HP Integrity Entry-Level (rx1000-rx6000 Series, Integrity)	✓		✓			✓
4Gb Fibre Channel Host Bus Adapters⁴ (HP Branded / 3rd Party)						
A8002A / Emulex LPe11000 (4G, PCI-e)						
A8003A / Emulex LPe11002 (4G, PCI-e)						
FW						2.72a2
RHEL 4.0 driver & SUSE SLES 9 driver						8.0.16.32
AE311A / QLogic QLE2460 (4G, PCI-e)						
AD300A / QLogic QLE2462 (4G, PCI-e)						
26-	1.09		1.09			1.09
RHEL 5.0 driver & SUSE SLES 10 driver	8.01.07.25		8.01.07.25			8.01.07.25
AD167A / Emulex LP1150 (4G, PCI-X 2.0)						
AD168A / Emulex LP11002 (4G, PCI-X 2.0)						
FW	2.72a2		2.72a2			2.72a2
RHEL 4.0 driver & SUSE SLES 9 driver	8.0.16.27		8.0.16.27			8.0.16.32
RHEL 5.0 driver & SUSE SLES 10 driver	8.1.6.7					8.1.6.7
AB429A / QLogic QLA2460 (4G, PCI-X 2.0)						
AB379A/AB379B / QLogic QLA2462 (4G, PCI-X 2.0)						
EFI	1.09		1.09			1.09
RHEL 4.0 driver & SUSE SLES 9 driver	8.01.07.25		8.01.07.25			8.01.07.25
RHEL 5.0 driver & SUSE SLES 10 driver	8.01.07.25					8.01.07.25
QMH2462 (4G, PCI-e) for HPC-Class BladeSystem						
EFI	1.09		1.09			1.09
RHEL 5.0 driver & SUSE SLES 10 driver	8.01.07.25		8.01.07.25			8.01.07.25
2Gb Fibre Channel Host Bus Adapters⁴ (HP Branded / 3rd Party)						
A7538A / QLogic QLA2340 (2G, PCI-X)						
A6826A / QLogic QLA2342 (2G, PCI-X)						
BIOS	1.49		1.49			1.49
RHEL 4.0 driver & SUSE SLES 9 driver	8.01.07.25		8.01.07.25			8.01.07.25
RHEL 5.0 driver & SUSE SLES 10 driver	8.01.07.25					8.01.07.25
SAS Host Bus Adapters⁶						
AH303A (HP SC44Ge, 3Gb, PCI-e, 4 channel)	✓		✓			✓
SCSI Host Bus Adapters⁶						
A7173A (Ultra320, PCI-X, 2 channel)	✓		✓			✓
Disk Array Multipath Support⁴						
Emulex Multipulse (2.6 kernels only)	2.1.9		2.1.9			2.2.20
QLogic Native Multi-Path for Linux (2.4 kernel)	7.07.05		7.07.05			7.07.05
QLogic Native Multi-Path for Linux (2.6 kernel)	8.01.07.25		8.01.07.25			8.01.07.25

NOTES:

1) SAN Media server supported with CA ARCserve 11.5 & prior. Version 12 only supports backup of LAN clients

2) Please reference your ISV support matrices for supported application and operating system version compatibility.

3) EBS is not dependent on specific kernel errata levels. For required/supported kernel errata, refer to your online storage array and backup application support documentation.

4) Refer to [EBS Design Guide](#) for configuration rules and guidelines.

5) Due to tape device discovery issues, SP2 for SLES 9 is not supported

6) Refer to server QuickSpecs to determine which HBAs are supported

HP StorageWorks EBS Compatibility Matrix

Linux (x64)^{4,6} (page 1 of 2)

DAS, DAF, and SAN Support	HP Data Protector	CA ARCserve ¹	EMC NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec Veritas NetBackup
Operating Systems²						
RHEL [AS/ES/WS] 4.0 (x64)	Update 7		Update 7	Update 7		Update 7
RHEL [AS/ES/WS] 5.0 (x64)	✓		✓	✓	Update 2	Update 2
SUSE SLES 9 (x64)	Update 4		Update 4	Update 4		Update 4
SUSE SLES 10 (x64)	SP1		SP1	SP1	SP1	SP1
Servers						
HP ProLiant	✓		✓	✓	✓	✓
HP ProLiant c-Class BladeSystem	✓		✓	✓	✓	✓
HP ProLiant p-Class BladeSystem	✓		✓	✓	✓	✓
HP NetServer	✓		✓	✓	✓	✓
Third Party X86	✓		✓	✓	✓	✓
8Gb Fibre Channel Host Bus Adapters^{3,5} (HP Branded / 3rd Party)						
AK344A / QLogic QLE2560 (8G, PCI-e) AJ764A / QLogic QLE2562 (8G, PCI-e)						
BIOS	2.00		2.00	2.00	2.02	2.02
RHEL 4.0 driver & SUSE SLES 9 driver						8.02.11
RHEL 5.0 driver & SUSE SLES 10 driver	8.02.03		8.02.03	8.02.03	8.02.11	8.02.11
81E / Emulex LPe12000 (8G, PCI-e) 82E / Emulex LPe12002 (8G, PCI-e)						
FW					1.00a12	1.00a12
RHEL 4.0 driver & SUSE SLES 9 driver						8.0.16.40
RHEL 5.0 driver & SUSE SLES 10 driver					8.2.0.22_p1	8.2.0.22_p1
4Gb Fibre Channel Host Bus Adapters^{3,5} (HP Branded / 3rd Party)						
FC2142SR / Emulex LPe1150 (4G, PCI-e) FC2242SR DC / Emulex LPe11002-M4 (4G, PCI-e)						
FW	2.70a5		2.70a5	2.70a5	2.72a2	2.72a2
RHEL 4.0 driver & SUSE SLES 9 driver	8.0.16.32		8.0.16.32	8.0.16.32		8.0.16.40
RHEL 5.0 driver & SUSE SLES 10 driver	8.1.6.7		8.1.6.7	8.1.6.7	8.2.0.22_p1	8.2.0.22_p1
FC1142SR / QLogic QLE2460 (4G, PCI-e) FC1242SR DC / QLE2462 (4G, PCI-e)						
BIOS	1.26		1.26	1.26	2.02	2.02
RHEL 4.0 driver & SUSE SLES 9 driver	8.01.07.25		8.01.07.25	8.01.07.25		8.02.11
RHEL 5.0 driver & SUSE SLES 10 driver	8.01.07.25		8.01.07.25	8.01.07.25	8.02.11	8.02.11
FC2143 / Emulex LP1150 (4G, PCI-X 2.0) FC2243 / Emulex LP11002 (4G, PCI-X 2.0)						
FW	2.70a5		2.70a5	2.70a5	2.72a2	2.72a2
RHEL 4.0 driver & SUSE SLES 9 driver	8.0.16.32		8.0.16.32	8.0.16.32		8.0.16.40
RHEL 5.0 driver & SUSE SLES 10 driver	8.1.6.7		8.1.6.7	8.1.6.7	8.2.0.22_p1	8.2.0.22_p1
FC1143 / QLogic QLA2460 (4G, PCI-X 2.0) FC1243 / QLogic QLA2462 (4G, PCI-X 2.0)						
BIOS	1.26		1.26	1.26	2.02	2.02
RHEL 4.0 driver & SUSE SLES 9 driver	8.01.07.25		8.01.07.25	8.01.07.25		8.02.11
RHEL 5.0 driver & SUSE SLES 10 driver	8.01.07.25		8.01.07.25	8.01.07.25	8.02.11	8.02.11

NOTES:

- 1) SAN Media server supported with CA ARCserve 11.5 & prior. Version 12 only supports backup of LAN clients
- 2) Please reference your ISV support matrices for supported application and operating system version compatibility.
- 3) Refer to [EBS Design Guide](#) for configuration rules and guidelines.

- 4) EBS is not dependent on specific kernel errata levels. For required supported kernel errata, refer to your online storage array and backup application support documentation.
- 5) 3rd Party adapters require HP drivers and firmware.
- 6) Due to tape device discovery issues, SP2 for SLES 9 is not supported.

HP StorageWorks EBS Compatibility Matrix

Linux (x64)^{4,5} (page 2 of 2)

DAS, DAF, and SAN Support	HP Data Protector	CA ARCserve ¹	EMC NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec Veritas NetBackup
4Gb HP c-Class BladeSystem Fibre Channel Host Bus Adapters³						
LPe1105 (4G, PCI-e) for HP c-Class BladeSystem						
FW	2.70a5		2.70a5	2.70a5	2.72a2	2.72a2
RHEL 4.0 driver & SUSE SLES 9 driver	8.0.16.32		8.0.16.32	8.0.16.32		8.0.16.40
RHEL 5.0 driver & SUSE SLES 10 driver	8.1.6.7		8.1.6.7	8.1.6.7	8.2.2.0.22_p1	8.2.2.0.22_p1
QMH2462 (4G, PCI-e) for HP c-Class BladeSystem						
BIOS	1.26		1.26	1.26	2.02	2.02
RHEL 4.0 driver & SUSE SLES 9 driver	8.01.07.25		8.01.07.25	8.01.07.25		8.02.11
RHEL 5.0 driver & SUSE SLES 10 driver	8.01.07.25		8.01.07.25	8.01.07.25	8.02.11	8.02.11
2Gb Fibre Channel Host Bus Adapters^{3,6} (HP Branded / 3rd Party)						
FCA2214 / QLogic 2340 (2G, PCI-X) FCA2214DC / QLogic 2342 (2G, PCI-X)						
BIOS	1.45		1.45	1.45	1.45	1.45
RHEL 4.0 driver & SUSE SLES 9 driver	8.01.07.25		8.01.07.25	8.01.07.25		8.02.11
RHEL 5.0 driver & SUSE SLES 10 driver	8.01.07.25		8.01.07.25	8.01.07.25	8.02.11	8.02.11
2Gb HP p-Class BladeSystem Fibre Channel Host Bus Adapters³						
Emulex Mezzanine Card for p-Class Blades (2G, PCI-X)						
FW	1.91a5		1.91a5	1.91a5	1.91a5	1.91a5
RHEL 4.0 driver & SUSE SLES 9 driver	8.0.16.32		8.0.16.32	8.0.16.32		8.0.16.32
RHEL 5.0 driver & SUSE SLES 10 driver	8.1.6.7		8.1.6.7	8.1.6.7	8.1.6.7	8.1.6.7
QLogic Balcony Card for p-Class Blades (2G, PCI-X) QLogic Mezzanine Card for p-Class Blades G2/G3 (2G, PCI-X)						
BIOS (BL25p)	1.48		1.48	1.48	1.48	1.48
BIOS (BL20p, BL30p, and BL35p)	1.48		1.48	1.48	1.48	1.48
RHEL 4.0 driver & SUSE SLES 9 driver	8.01.07.25		8.01.07.25	8.01.07.25		8.01.07.25
RHEL 5.0 driver & SUSE SLES 10 driver	8.01.07.25		8.01.07.25	8.01.07.25	8.01.07.25	8.01.07.25
SAS Host Bus Adapters^{7, 8, 9}						
416096-B21 (HP SC44Ge, 3Gb, PCI-e, 4 channel) ¹¹	✓		✓			✓
SCSI Host Bus Adapters^{7, 8, 9}						
AH627A (HP U320e, Ultra320, PCI-e, 2 channel)	✓		✓			✓
412911-B21 (HP SC11Xe, Ultra320, PCI-e, 1 channel)	✓		✓			✓
374654-B21 (Ultra320, PCI-X, 1 channel)	✓		✓			✓
SCSI - Third Party HBAs and Integrated Controllers^{10, 12}						
Adaptec 29320ALP-R (Ultra320, PCI-X, 1 channel)	✓		✓			✓
ATTOTech UL4D (Ultra320, PCI-X, 2 channel)	✓		✓			✓
ATTOTech UL5D (Ultra320, PCI-e, 2 channel)	✓		✓			✓
Disk Array Multipath Support³						
Device Mapper				4.0.0	4.0.1	
Emulex Multipulse (2.6 kernels only)	2.1.9		2.1.9	2.1.9	2.2.20	2.2.20
QLogic Native Multi-Path for Linux (2.6 kernel)	8.01.07.25		8.01.07.25	8.01.07.25	8.01.07.25	8.01.07.25

NOTES:

- 1) SAN Media server supported with CA ARCserve 11.5 & prior. Version 12 only supports backup of LAN clients
- 2) Please reference your ISV support matrices for supported application and operating system version compatibility.
- 3) Refer to [EBS Design Guide](#) for configuration rules and guidelines.

- 4) EBS is not dependent on specific kernel errata levels. For required supported kernel errata refer to your online storage array and backup application support documentation.
- 5) Due to tape device discovery issues, SP2 for SLES 9 is not supported.
- 6) 3rd Party adapters require HP drivers and firmware.
- 7) SMART Array Controllers do not support attachment to tape automation products

- 8) Refer to server QuickSpecs to determine which HBAs are supported
- 9) Third party x86 servers supported with HP-branded adapters only
- 10) See vendor website for additional details.
- 11) The 416096-B21 also supports the PCI Expansion Blade (448018-B21)
- 12) Third Party SCSI HBA support is for HP servers only

HP StorageWorks EBS Compatibility Matrix

Solaris (page 1 of 2)

DAS, DAF, and SAN Support	HP Data Protector	CA ARCserve ¹	EMC NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec Veritas NetBackup
Operating Systems ²						
Solaris 9	✓		✓	✓		✓
Solaris 10 SPARC	Update 4		Update 4	Update 4		Update 5
Solaris 10 x86/x64				Update 4		Update 4
Servers						
Sun UltraSPARC	✓		✓	✓		✓
Sun Sun Fire	✓		✓	✓		✓
HP ProLiant				✓		✓
4Gb Fibre Channel Host Bus Adapters ³						
SG-XPCI1FC-EM4-Z (4G, PCI-X 2.0)						
SG-XPCI2FC-EM4-Z (4G, PCI-X 2.0)						
Sun Native Driver	✓		✓	✓		✓
Emulex LP11000 (4G, PCI-X 2.0)						
Emulex LP11002 (4G, PCI-X 2.0)						
Sun Native Driver	✓		✓	✓		✓
SG-XPCI1FC-QF4 (4G, PCI-X 2.0)						
SG-XPCI2FC-QF4 (4G, PCI-X 2.0)						
Sun Native Driver	✓		✓	✓		✓
QLogic QLA2460 (4G, PCI-X 2.0)						
QLogic QLA2462 (4G, PCI-X 2.0)						
Sun Native Driver	✓		✓	✓		✓
2Gb Fibre Channel Host Bus Adapters ³						
SG-XPCI1FC-EM2 (2G, PCI-X)						
SG-XPCI2FC-EM2 (2G, PCI-X)						
Sun Native Driver	✓		✓	✓		✓
SG-XPCI1FC-QF2 (X6767A) (2G, PCI-X)						
SG-XPCI2FC-QF2 (X6768A) (2G, PCI-X)						
Sun Native Driver	✓		✓	✓		✓
SG-XPCI1FC-QL2 (2G, PCI-X)						
SG-XPCI2FC-QF2-Z (2G, PCI-X)						
Sun Native Driver	✓		✓	✓		✓
QLogic QLA2340 (2G, PCI-X)						
QLogic QLA2342 (2G, PCI-X)						
Fcode			2.00.09	2.00.09		
QLogic Driver			4.20	4.20		
Sun Native Driver			✓	✓		
FCA2684/Emulex LP10000 (2G, PCI-X)						
FCA2684DC/Emulex LP10000DC (2G, PCI-X)						
FW	1.91a1		1.91a1	1.91a1		1.91a1
Emulex Driver	6.02h		6.02h ⁴	6.02h ⁴		6.02h
Sun Native Driver			✓	✓		✓

NOTES:

- 1) SAN Media server supported with CA ARCserve 11.5 & prior. Version 12 only supports backup of LAN clients
- 2) Please reference your ISV support matrices for supported application and operating system version compatibility.

- 3) Refer to [EBS Design Guide](#) for configuration rules and guidelines.
- 4) Supported with Solaris 9 only.

HP StorageWorks EBS Compatibility Matrix

Solaris (page 2 of 2)

DAS, DAF, and SAN Support	HP Data Protector	CA ARCserve	EMC NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec Veritas NetBackup
SAS Host Bus Adapters						
SG-XPCI8SAS-E-Z (PCI-X)						✓ ⁴
SG-XPCIE8SAS-E-Z (PCI-e)						✓ ⁴
SCSI Host Bus Adapters						
SGXPCI1SCSILM320-Z (Ultra320, PCI-X, 1 Channel)						✓ ⁴
SG-XPCIE2SCSIU320Z (Ultra320, PCI-e, 2 Channel)						✓ ⁴
Disk Array Multipath Support ¹						
Solaris MPxIO			✓	✓		✓
VERITAS DMP			✓ ³			✓ ³
High Availability ²						
VERITAS Cluster Server						✓

NOTES:

- 1) Refer to [EBS Design Guide](#) for configuration rules and guidelines.
- 2) Refer to the [EBS Design Guide](#) for details on failover configurations. For Operating Systems not listed, please refer to the ISV's web page for supported High Availability configurations.
- 3) Supported with Solaris 10 only.

- 3) Supported with Solaris 10 only.
- 4) Please refer to Customer Advisory "[c01536454](#)" for required configuration details.

HP StorageWorks EBS Compatibility Matrix

Tru64 Unix

DAS, DAF, and SAN Support	HP Data Protector	CA ARCserve ¹	EMC NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec Veritas NetBackup
Operating Systems ²						
Tru64 5.1A ⁸	5.1A pk6		5.1A pk6			5.1A pk6
Tru64 5.1B ⁸	5.1B-3		5.1B-4			5.1B-4
Servers						
HP AlphaServer	✓		✓			✓
2Gb Fibre Channel Host Bus Adapters ⁵						
FCA2684 (2G, PCI-X)						
FCA2684 DC (2G, PCI-X)						
FW	1.91x6		1.91x6			1.91x6
Tru64 Driver	2.17		2.17			2.17
FCA2354 (2G, PCI-X)						
FW	3.93a0		3.93a0			3.93a0
Tru64 Driver	2.17		2.17			2.17
FCA2384 (2G, PCI-X)						
FW	1.91x6		1.91x6			1.91x6
Tru64 Driver	2.17		2.17			2.17
SCSI Host Bus Adapters ⁹						
3X-KXPEA-DB (Ultra160, PCI-X, 2 channel)	✓		✓			✓
Disk Array Multipath Support ⁵						
Tru64 Multipath			Native			Native
High Availability ⁴						
Tru64 (TruCluster)			✓			✓

OpenVMS

Operating Systems ^{1, 2}						
OpenVMS 8.2 ^{3, 6, 8}	✓					
OpenVMS 8.2-1 ^{3, 6, 8}	✓					
OpenVMS 8.3 ^{3, 6, 8}	✓					
Servers						
HP AlphaServer	✓					
HP Integrity	✓					
2Gb Fibre Channel Host Bus Adapters ⁵						
FCA2684 (2G, PCI-X)						
FW	1.91x6					
OVMS Driver	Native					
FCA2354 (2G, PCI-X)						
FW	3.93a0					
OVMS Driver	Native					
FCA2384 (2G, PCI-X)						
FW	1.91x6					
OVMS Driver	Native					
A6826A (2G, PCI-X)						
EFI	1.47					
OVMS Driver	Native					

NOTES:

- 1) SAN Media server supported with CA ARCserve 11.5 & prior. Version 12 only supports backup of LAN clients
- 2) Please reference your ISV support matrices for supported application, device and operating system version compatibility.
- 3) OpenVMS supported in switched fabric configurations only.
- 4) Refer to the [EBS Design Guide](#) for details on failover configurations. For Operating Systems not listed, please refer to the ISV's web page for supported High Availability configurations.
- 5) Refer to [EBS Design Guide](#) for configuration rules and guidelines.

- 6) [Click here](#) for additional data protection applications and solution information for OpenVMS, which includes HP and 3rd Party Heterogeneous Backup Solutions, as well as OpenVMS-specific solutions including ABS (Archive Backup Systems) and SLS (Storage Library System)
- 7) Support is with BEB v10.5 only
- 8) Ultrium 230 (LTO) not supported
- 9) Refer to server QuickSpecs to determine which HBAs are supported

HP StorageWorks EBS Compatibility Matrix

AIX

DAS, DAF, and SAN Support	HP Data Protector	CA ARCserve ¹	EMC NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec Veritas NetBackup
Operating Systems ²						
AIX 6.1				✓		
AIX 5.3	✓ ³		✓	✓		✓
AIX 5.2	✓ ³		✓	✓		✓
Servers						
IBM RS/6000	✓		✓	✓		✓
IBM pSeries	✓		✓	✓		✓
4Gb Fibre Channel Host Bus Adapters ⁴						
AIX 5773 (4G, PCI-e) AIX 5774 (4G, PCI-e) AIX Driver				Native ⁷		
IBM 1905 (4G, PCI-X 2.0) IBM 1910 (4G, PCI-X 2.0) AIX Driver			Native ⁶	Native ⁶		Native ⁶
IBM 5758 (4G, PCI-X 2.0) IBM 5759 (4G, PCI-X 2.0) AIX Driver			Native ⁶	Native ⁶		Native ⁶
2Gb Fibre Channel Host Bus Adapters ⁴						
IBM 5716 (2G, PCI-X) AIX Driver	Native ⁶		Native	Native		Native
IBM 6239 (2G, PCI-X) AIX Driver	Native		Native	Native		Native
IBM 6228 (2G, PCI-X) AIX Driver	Native		Native	Native		Native
Disk Array Multipath Support ⁴						
AIX MPIO	✓ ⁵		✓	✓		✓

NOTES:

- 1) SAN Media server supported with CA ARCserve 11.5 & prior. Version 12 only supports backup of LAN clients
- 2) Please reference your ISV support matrices for supported application and operating system version compatibility.
- 3) Robot control is not supported
- 4) Refer to [EBS Design Guide](#) for configuration rules and guidelines.

- 5) Disk and tape require dedicated HBA's.
- 6) Supported with AIX 5.3 only.
- 7) Supported with AIX 6.1 only.

HP StorageWorks EBS Compatibility Matrix

NetWare

DAS, DAF, and SAN Support	HP Data Protector	CA ARCserve ¹	EMC NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec for NetWare	Symantec Veritas NetBackup
Operating Systems ²						
NetWare 6.5	6.5 sp5	6.5 sp2 ³			6.5 sp6	
Servers						
HP ProLiant ⁵	✓	✓			✓	
HP ProLiant p-Class Blade Server ⁵	✓	✓			✓	
Third Party X86	✓	✓			✓	
2Gb Fibre Channel Host Bus Adapters ^{3, 5}						
FCA2214 (FCA2210) / QLA2340 (2G, PCI-X) FCA2214DC / QLA2342 (2G, PCI-X)						
FW	1.45	1.45			1.45	
NetWare Driver	6.90m	6.51b			6.90m	
SCSI Host Bus Adapters ^{6, 7, 8}						
374654-B21 (Ultra320, PCI-X, 1 channel)	✓	✓			✓	✓
SCSI - Third Party HBAs and Integrated Controllers ^{9, 10}						
Adaptec 29320ALP-R (Ultra320, PCI-X, 1 channel)	✓	✓			✓	✓
Disk Array Multipath Support ⁵						
MPIO	✓				✓	
High Availability ⁴						
NetWare 6.5 (NWCS)	✓				✓	

NOTES:

- 1) Supported with CA ARCserve 11.1 only
- 2) Please reference your ISV support matrices for supported application and operating system version compatibility.
- 3) NetWare is supported with ESL libraries in a homogeneous environment only.
- 4) Refer to the [EBS Design Guide](#) for details on failover configurations. For Operating Systems not listed, please refer to the ISV's web page for supported High Availability configurations.

- 5) Refer to [EBS Design Guide](#) for configuration rules and guidelines.
- 6) Refer to server QuickSpecs to determine which HBAs are supported
- 7) Third party x86 servers supported with HP-branded adapters only
- 8) SMART Array Controllers do not support attachment to tape automation products
- 9) See vendor website for additional details.
- 10) Third Party SCSI HBA support is for HP servers only

HP StorageWorks EBS Compatibility Matrix

RAID Arrays

SAN Support	HP Data Protector	CA ARCserve	EMC NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec Veritas NetBackup
RAID Arrays						
XP 24000/20000 ¹	✓	✓	✓	✓	✓	✓
XP 12000/10000 ¹	✓	✓	✓	✓	✓	✓
XP 1024/128 ¹	✓	✓	✓	✓	✓	✓
XP 48/512 ¹	✓	✓	✓	✓	✓	✓
Enterprise Virtual Array ^{1,3} EVA 4100/6100/8100	✓	✓	✓	✓	✓	✓
Enterprise Virtual Array ^{1,3} EVA 4000/6000/8000	✓	✓	✓	✓	✓	✓
Enterprise Virtual Array ^{1,3} EVA 4400	✓	✓	✓	✓	✓	✓
Enterprise Virtual Array ^{1,3,6} EVA 3000/5000	✓	✓	✓	✓	✓	✓
MSA2000fc	✓	✓	✓	✓	✓	✓
MSA1500 ¹	✓	✓	✓	✓	✓	✓
MSA1000 Small Business SAN Kit	✓ ⁴	✓ ⁵			✓ ⁵	
MSA1000 ²	✓	✓	✓	✓	✓	✓

NOTES:

- 1) Consult with your hp solutions provider for disk array SAN compatibility information
- 2) For compatibility information about the optional MSA SAN Switch, refer to the [Infrastructure](#) page within this document for support details
- 3) Supported with Fibre Channel and FATA disk drives.

- 4) LINUX and Windows support only
- 5) Windows support only
- 6) Supported with VCS 3.X and 4.X.

HP StorageWorks EBS Compatibility Matrix

SAN Infrastructure

SAN Support	Supported Release	Native Fibre Channel Drives			Virtual Library Systems			Interface Controllers					
		Ultrium 1840 FC Drive (4Gb)	Ultrium 960 FC Drive (4Gb)	Ultrium 960 FC Drive (2Gb)	VLS 12000 /300 EVA Gateway	VLS 9000 Series	VLS 6000 Series	e2400-FC (4Gb)	e2400-FC (2Gb)	e2400-160 (2 Gb)	e1200-320 (4Gb)	NSR E1200-160 (2 Gb)	NSR N1200-320 (4Gb)
SAN Switches ¹													
B-Series ⁸													
SAN Director 4/256 with 8/16, 8/32, 4/16, 4/32, and 4/48 FC	6.1.0d	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
SAN Switch 8/8, 8/24, 8/40, 8/80	6.1.0d	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
SAN Switch 4/64, 4/32B, 4/32, 4/16, 4/8	6.1.0d	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Brocade 4Gb SAN Switch for HP c-Class BladeSystem (4/12 and 4/24)	6.1.0d	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Brocade 8Gb SAN Switch for HP BladeSystem c-Class (8/12c and 8/24c)	6.1.0_8e1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Brocade 4Gb SAN Switch for HP p-Class BladeSystem	6.1.0d	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Brocade 8Gb embedded SAN Switch for EVA4400	6.1.0_8e1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
SAN Director 2/128	5.3.1b	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Core Switch 2/64	5.0.5f	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
SAN Switch 2/32, 2/8V, 2/16V, 2/16N	5.3.1b	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
SAN Switch 2/16, 2/8, 2/8-EL, 2/16-EL	3.2.1c	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
FC Switch 16B, 8B	3.2.1c	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MSA SAN Switch 2/8	3.2.1c	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
C-Series													
Cisco MDS 9513, 9509, 9506, 9222i, 9216i, 9216A, 9216, 9124, 9124e, 9140, 9134, 9120	3.3(1c)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Cisco MDS 9020	2.1(3)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
M-Series													
McData 4Gb SAN Switch for HP p-Class BladeSystem	6.4.0.13.00	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
McData Spheron 4700, 4400	09.07.02	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Director Switch 2/140, 2/64	09.07.02	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Edge Switch 2/32, 2/24, 2/16, 2/12	09.07.02	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
8Gb Simple SAN Connection													
HP StorageWorks 8/20q Fibre Channel Switch ⁶	7.6.0.02.00	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Multi-Protocol Routers, Gateways, and Virtual Connect ¹													
HP 4Gb Virtual Connect FC Module (VC-FC) ⁷	1.21	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
StorageWorks 400 Multi-Protocol Router ^{2,5}	6.1.0d	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
StorageWorks Multi-Protocol Router Blade ^{2,5}	6.1.0d	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Multi-Protocol Router ^{2,3}	7.4.1e	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
IP Storage Router 2122-2 ⁴	3.4.5c	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

NOTES:

- 1) Refer to [HP StorageWorks SAN Design Reference Guide](#) for configuration rules and guidelines
- 2) Supported with all backup application/operating system combinations.
- 3) Supported as a SAN-to-SAN interconnect only.
Direct connection of libraries or hosts to the MP Router is not supported.
- 4) Supported for FC-IP SAN-to-SAN interconnect only.

- 5) Tape pipelining not supported.
- 6) Support for this platform is restricted. Please reference the switches' [Quick Spec on hp.com](#) for supported operating systems and host bus adapters.
- 7) Cisco supported with SAN-OS version 3.2(3) only. Does not support direct connection of tape devices.**
- 8) Access Gateway (AG) mode is supported. See [SPOCK](#) for detailed support information.**

HP StorageWorks EBS Compatibility Matrix

ProLiant Storage Servers (NAS), All-in-One (AiO) Storage Servers

DAS, DAF, and SAN Support	HP Data Protector	CA ARCserve	EMC NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec Veritas NetBackup
HP StorageWorks Enterprise File Services (EFS) Clustered Gateway is a file server gateway. Based on a truly symmetrical cluster file system						
EFS Clustered Gateway (PolyServe) Windows EVA File Services (PolyServe) Windows	✓	✓	✓ ⁴	✓	✓	✓
EFS Clustered Gateway (PolyServe) Linux EVA File Services (PolyServe) Linux	✓		✓	✓		✓
HP All-in-One (AiO) Storage, single solution providing shared storage for application servers (iSCSI Target), file serving (NAS), backup target services and data protection software						
AiO1200 ⁵	✓	✓	✓	✓	✓	✓
AiO1200r ²	✓	✓	✓	✓	✓	✓
AiO600 ²	✓	✓	✓	✓	✓	✓
AiO400t ²	✓	✓	✓	✓	✓	✓
AiO400r ²	✓	✓	✓	✓	✓	✓
AiO SB600c Storage Blade ³	✓	✓	✓	✓	✓	✓
HP ProLiant Storage Server is a powerful file and print solution that enables environments to centralized Network Attached Storage (NAS).						
DL585 G2 Storage Server ⁵	✓	✓	✓	✓	✓	✓ ¹
DL380 G5 Storage Server ⁵	✓	✓	✓	✓	✓	✓ ¹
DL320s Storage Server ⁵	✓	✓	✓	✓	✓	✓ ¹
DL185 G5 Storage Server ²	✓	✓	✓	✓	✓	✓ ¹
DL160 G5 Storage Server ²	✓	✓	✓	✓	✓	✓ ¹
ML350 G5 Storage Server ²	✓	✓	✓	✓	✓	✓ ¹
ML110 G5 Storage Server ²	✓	✓	✓	✓	✓	✓ ¹
BL460c Storage Server ³	✓	✓	✓	✓	✓	✓ ¹

NOTES:

1) Requires NetBackup 5.0 MP2 or later.

2) Tape connectivity via direct-attach SCSI and SAS.

SAS support requires Storport.sys KB950448.

3) Tape connectivity via direct-attach FC and Tape Blade.

4) Please refer to Customer Advisory "[c01290486](#)" for required configuration details.

5) Tape connectivity via direct-attach SCSI only.

HP StorageWorks EBS Compatibility Matrix

Storage Software

	HP Data Protector	CA ARCserve	EMC NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec Veritas NetBackup
Command View TL	2.3.01	2.3.01	2.3.01	2.3.01	2.3.01	2.3.01
Continuous Access	✓	✓	✓	✓	✓	✓
Insight Manager Agents	8.11.0	8.11.0	8.11.0	8.11.0	8.11.0	8.11.0
PolyServe	✓	✓ ²	✓ ¹	✓	✓	✓
Smart Start	8.10	8.10	8.10	8.10	8.10	8.10
Storage Essentials	6.0.2	6.0.2	6.0.2	6.0.2	6.0.2	6.0.2
Systems Insight Manager (SIM)	5.2	5.2	5.2	5.2	5.2	5.2

NOTES:

- 1) Please refer to Customer Advisory "[c01290486](#)" for required configuration details.
- 2) Supported with CA ARCserve for Windows.

HP StorageWorks EBS Compatibility Matrix

Legacy Device Support

Device Name	Last EBS Compatibility Matrix Where Device Was Listed ¹
Network Storage Routers N1200 & M2402	July 2008
1/8 Autoloaders	December 2007
ESL9000 series libraries	September 2007
ESL E-Series SDLT 160/320, ESL9000 Series SDLT 160/320, 1/8 Tape Autoloader (SDLT 160/320)	July 2007
ESL9000 Series (Ultrium 230 and SDLT 110/220),MSL5000 Series	March 2006
SSL1016 Tape Autoloaders, 1/8 Tape Autoloaders (Ultrium 230 and Ultrium 460)	March 2006
ESL9326 DX, ESL9198 DLX, MSL5026 DLX, SSL2020 TL, DLT 40/80	March 2005
Modular Data Router (MDR)	February 2004
TL895, TL891DLX	December 2002
ESL9326D, TL891D, DLT 35/70	April 2002

NOTES:

1) EBS Compatibility Matrices from the last several years can be found on <http://www.hp.com/go/ebs>.
For matrices older than listed, consult your HP Account Representative.

HP StorageWorks EBS Compatibility Matrix

Useful Links

Product Family	URL
EBS Home Webpage	http://www.hp.com/go/ebs
EBS Design Guide	http://h20000.www2.hp.com/bc/docs/support/SupportManual/c00775232/c00775232.pdf
EBS 1-2-3	http://h18000.www1.hp.com/products/storageworks/ebs/ebs123.html
EBS Example Configurations	http://h200005.www2.hp.com/bc/docs/support/SupportManual/c00375285/c00375285.pdf
Library and Tape Tools (LTT)	http://h18006.www1.hp.com/products/storageworks/ltt/index.html
Interconnects	http://h18006.www1.hp.com/storage/saninfrastructure.html
RAID Arrays	http://h18006.www1.hp.com/storage/arrayssystems.html
Storage Software	http://h18006.www1.hp.com/storage/software.html
Data Protector	http://www.hp.com/go/dataprotector
Storage Media	http://h18006.www1.hp.com/storage/storagemedia.html
Firmware & Driver Downloads	http://welcome.hp.com/country/us/en/support.html
Windows OS/ProLiant Server Support Matrix	http://h10018.www1.hp.com/wwsolutions/windows/index-all.html
Linux OS/ProLiant Server Support Matrix	http://h18004.www1.hp.com/products/servers/linux/hpLinuxcert.html
NetWare OS/ProLiant Server Support Matrix	http://h10018.www1.hp.com/wwsolutions/novell/index-all.html
IT Resource Center Website	http://itrc.hp.com
Performance and Troubleshooting Support	http://www.hp.com/support/pat
Network Services - Backup and Recovery	http://h20219.www2.hp.com/services/cache/10819-0-225-121.aspx
Tape Systems	http://www.hp.com/go/tape
HP StorageWorks SAN Design Reference Guide	http://h20000.www2.hp.com/bizsupport/TechSupport/DocumentIndex.jsp?contentType=SupportManual&locale=en_US&docIndexId=179911&taskId=101&prodTypeId=12169&prodSeriesId=406734

HP StorageWorks EBS Compatibility Matrix

Important Advisories

Date	Problem Description	Number
Tape Libraries Advisories		
08/27/08	Errors on all tokens when the HP StorageWorks Encryption Kit is used with early HP StorageWorks MSL2024 libraries	c01509121
08/20/08	The HP StorageWorks 1/8 G2 autoloader, MSL2024, MSL4048, and MSL8096 tape libraries are not supported with HP StorageWorks SAS drives on HP-UX 11.23	c01534825
07/18/08	HP StorageWorks Ultrium 4 drives do not communicate with the host on HP StorageWorks 1/8 G2 Autoloader or HP StorageWorks MSL2024, MSL4048, or MSL8098 libraries when the Encryption Kit is enabled	c01487509
03/13/08	HP StorageWorks ESL E-Series libraries will post an error message when upgrading from 6.20 to 6.22 firmware	c01387942
03/12/08	HP StorageWorks D2D Backup Systems using HP Data Protector 6.0 (A.06.00) cannot import media containing spanned backup sessions	c01214249
03/07/08	HP StorageWorks ESL E-Series libraries have issues migrating from 1.x Interface Manager code to Interface Manager 2.20, 2.30, and possibly future firmware	c01377519
02/27/08	HP StorageWorks Virtual Library Systems (VLS) will not initialize after upgrading the system BIOS on HP ProLiant DL360 G5 node server using the 7.91 Firmware Maintenance CD	c01369226
01/02/08	HP StorageWorks Virtual Library System (VLS) is not functional after entering or modifying the network configuration settings	c01292136
11/30/07	Error F5 during an HP L&TT drive or media assessment test on an HP StorageWorks 1/8 G2 Tape Autoloader or HP StorageWorks MSL2024, 4048, or 8096 Tape Libraries.	c01273166
11/12/07	HP Secure Key Manager (SKM) - Data Protection Application behavior when SKM is unavailable	c01269477
10/1/07	(Revised) HP StorageWorks Ultrium 230/460/960 Tape Drives - tape unload instructions for tapes stuck in Ultrium 230/460/960 tape drives	c00795203
10/05/07	Virtual Library Systems - VLS models 6200, 6600, and the 12000 EVA Gateway running software version 2.0.0 are not currently supported with ARCserve 11.1 or 11.5 running on Linux.	c01181673
09/01/07	NetApp Filers - Unable to Access Tape Devices Mapped Behind Port 1 of Interface Controllers in ESL E-Series and EML E-Series Enterprise Tape Libraries	c01154679
05/31/07	HP StorageWorks MSL5000 and MSL6000 Libraries - potential for CRC or Parity Errors when SCSI Termination is on the Controller	c00659626
Application Advisories		
09/23/08	Data Protector Express 4.0 is unable to read or import data from Data Protector Express 3.5 on Linux 32bit or 64bit systems	c01548338
04/04/08	Cleaning cartridge does not return to original storage slot after performing an autoloader tape drive clean operation when using Data Protector Express 3.5 SP2 Media wizard	c01413689
04/04/08	Move media operation from the mail slot to any storage slot in an Autoloader or Changer library will hang when using Data Protector Express 3.5 SP2	c01413680
12/05/07	EMC NetWorker not recognizing the HP PolyServe clustered file system (PSFS)	c01290486
Operating System Advisories		
08/21/08	Data Protector in HP-UX version 11.31 may issue spurious critical warnings on reads and writes to LTO WORM media	c01519155
08/18/08	HP-UX 11.31 Poor I/O performance due to memory blocking during high system memory usage.	c01527093
11/21/07	Solaris – ESL E-Series and EML E-Series Library Reboots Causing Device Access Issues on Servers Running Sun Native HBA Drivers	c00965686
05/31/07	Microsoft Windows Server 2003 - Interoperability Issues with Persistent Binding of Symbolic Tape Names in an Enterprise Backup Solution (EBS) Configuration	c01064312
03/26/07	Emulex StorPort Driver - Targets Cannot be Persistently Bound when Running with the Emulex StorPort Driver	c00871551
03/07/07	Microsoft Windows SAN - How to Disable Tape Drive Polling on Microsoft Windows SAN-Attached Servers Running hplto.sys	c00718488
03/01/07	HP-UX 11.11 - Running Get All Elements Details on HP-UX 11.11 Hosts Can Cause Tape Backups to Abort	c00869191
Miscellaneous Advisories		

NOTE: There may be other important advisories that may effect your EBS environment that are not listed on this page. Refer to the technical knowledge base or contact your local support representative for additional information.

To view these advisories do the following:

- 1) Click on the advisory number above to go to the Business Support Center or go to the IT Resource Center at <http://itrc.hp.com> (NOTE: To review the ITRC documents, you must register to use this website.)
- 2) Select "search technical knowledge base" (located at the top of the page under "maintenance and support (hp products)")
- 3) To search the technical knowledge base, enter a search word like "EBS" or an advisory number listed above.